THE AMERICAN JOURNAL

OF

Clinical Medicine

Editorial Cabinet
A. S. BURDICK
H. J. ACHARD
G. M. BLECH
G. H. CANDLER
WM. RITTENHOUSE

VOLUME XXX, 1923

PUBLISHED BY

The American Journal of Clinical Medicine

4753 Ravenswood Avenue, CHICAGO, ILL.

FEB 7 '23 Medical Lib.

THE AMERICAN JOURNAL OF

CLINICAL MEDICINE

Vol. 30, No. 1 JANUARY, 1923

The Pall of Grief

(With Apologies to Esop)

A JACKASS, harshly acquired, by attending school for a few years, the knowledge that 7 + 3 make 10, and learned the difference between a Bug and a Bugle, came to the conclusion that practically all available wisdom lay cribbed, cabined and confined within the osseous structure (as he termed it) which supported his auricular appendages. Having satisfied himself upon this point, and being possessed of a stentorian voice and a preternaturally solemn visage, he decided to go forth and point out to the rest of the inhabitants of the earth just how many kinds of a fool they were. Thereupon, he entered a city and began to bray loudly against the BAKERS. *"These men," he said, "are merely quasi-qualified quibblers—not definite distributors of a dictetic item of demonstrable desirability. I know, for I sat in a pan of dough once. Bread, as these mongers make it, is merely a little flour, much water and a trace of yeast-born air, hence, they deceive you when they give you such an absurd combination in exchange for your good money and, were you not so exceedingly stupid and easily gulled, you would see this readily. Moreover, these Bakers know nothing of the origin of fire—nor, for that matter, are they familiar with the true nature of the Life Principle. Yet forsooth they offer you the 'Staff of Life.' Away with such Charlatans and Frauds! A bas les Bakers!"*

Thereupon, the people being full-stomached and carried away by the great volume of sound proceeding from the Jackass, for the time being gave the Bakers the sardonic Ha! Ha! and their bread the go-by. But alas, very shortly they began to experience a feeling of emptiness and rumblings in their epigastric regions, which were only relieved by eating bread which the trustful bakers still produced.

Thereupon, the people communed together and, after passing a vote of confidence in the Bakers and their product, put a halter upon the Jackass and led him out to the city dump where he might possibly be of some use. "We prefer," they gently remarked to the dejected animal, "to be full fools to empty cadavers. You can die, if you want to; but, please! don't make so much noise doing it!"

Moral: Don't Believe All You Read in the Magazines!

G. H. C.

FORMIN

(HEXAMETHYLENAMINE MERCK)

Accepted by the Council on Pharmacy and Chemistry of the American Medical Association

When you prescribe "Formin" *you* choose the brand.

When you merely prescribe "Hexamethylenamine" *someone else* chooses for you.

FORMIN COSTS NO MORE

Merck & Co., New York

IN DANDRUFF

LOSS OF HAIR AND DISEASES OF THE SCALP

prescribe

EURESOL *pro Capillis*

A liquid resorcin preparation, exerting a powerful antiseptic and stimulating action on the scalp. It stops the itching, the formation of scales and the consequent loss of hair.

For sale by
MERCK & CO.
New York St. Louis

To be used in 3 to 5 per cent. lotions as scalpwash, also in salves

Literature and samples from
E. BILHUBER, Inc.
25 West Broadway, New York

Liquid Peptonoids with Creosote

has been demonstrated to be a thoroughly dependable product.

It combines the active *and* known therapeutic qualities *of* Creosote *and* Guaiacol, with the nutritive properties *of* Liquid Peptonoids.

It is extremely agreeable to the palate *and* acceptable to the stomach.

The peculiar ability *of*

Liquid Peptonoids with Creosote

to check a persistent, "hang-on" Winter cough—should be remembered.

It acts as a bronchial sedative and expectorant.

SAMPLES ON REQUEST

THE ARLINGTON CHEMICAL COMPANY
YONKERS, N. Y.

DR. GEORGE W. RAIZISS

DIRECTOR OF THE DERMATOLOGICAL RESEARCH LABORATORIES OF PHILADELPHIA

The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 30, No. 1 JANUARY, 1923

Thirty Years Ago and Now

THIRTY years ago, our views concerning the origin and nature of diseases were deeply under the influence of the bacterial ideas. The specific bacteria determining the etiology of anthrax, diphtheria, tuberculosis, various septic disease, had been established definitely and the bacterial school attempted to dominate the theory of disease, although it found it difficult to establish itself in practice.

Still, it had been realized here and there that things were not as simple as had been believed but ten years earlier when Cohnheim had declared: "According to our present-day views, everybody in whose organism the tubercle bacillus finds a foothold becomes tuberculous." He represented that school of clinicians that was dominated almost absolutely by bacteriologists. This extreme view was opposed by the practitians and the clinicians who could not be made to accept the idea that infectious diseases followed inevitably after an infection had taken place.

Moreover, in 1887, I. Straus, in Paris, had shown that tubercle bacilli might be present in the nasal and pharyngeal secretions of people who showed no signs of tuberculous disease. Similar findings were made in respect to other "germ diseases".

So, then, it was necessary, once more, to revise the theories of disease causation, and the brief ascendency of extreme bacteriologic thought was modified.

While there was not, and could not be a return to the older ideas of "humors", diatheses, and so forth, as being more or less responsible for illness, it was realized that infectious diseases could develop only if, in addition to the infectious virus, there was a certain something present in the organism; if, as the French clinicians put it, the "soil" (*terrain*) was receptive. On the basis of this idea, the existence of a "predisposition" once more forced itself into the foreground and this despite the unfavorable opinions voiced by certain authorities. Even Germain Sée's somewhat sneering remark, that predisposition is but a word used to mask our ignorance, could not cause clinicians to ignore the importance of the soil in which the seed (germ) was to be implanted.

Old-time clinicians, such as, for instance, Jonathan Hutchinson had stoutly maintained the importance of temperaments, idiosyncrasies, diatheses, in the etiology of disease (see, for instance, Jonathan Hutchinson, "Pedigree of Disease"). Soon after the turn of the century, these ideas came to be advanced more and more

strongly and, in a modified manner, the importance of constitutional peculiarities was once more recognized. Martius, of Rostock, Bendecke, of Marburg, and others published masterly treatises on this subject in which it was shown conclusively that infection and the infectious virus constitute only isolated factors in the causation of disease—necessary and indispensable, it is true, but not able to determine disease by themselves and without a predisposition, a constitution, a suitable soil (whatever you want to call it) favorable to the localization and multiplication of the germs.

At the present time, it is fully acknowledged that infectious diseases occur only in persons whose "resistance", or immunity, does not suffice to prevent the multiplication and unfavorable action of the germs that have determined an infection. We do not exactly know the nature of resistance, but we do know that it exists.

—

It has been said that predisposition to bacterial disease is, really, a mild degree of infection. This view received support through the investigations and experiences with what we have become accustomed to designate as "focal infection". The recognition of the fact that infection may exist, unrecognized and unknown, in hidden places, such as the tonsils, the sockets of the teeth, the appendix, lymph glands, and elsewhere, has made us realize the reason why some people acquire bacterial affections more readily than others, why these may follow upon apparently slight and unimportant occurrences, why they may be unusually difficult to manage and to remove, and many other points of interest.

To refer to occult tuberculosis infection, as a ready instance, it may happen that an inactive, dormant infection of one or more lymph glands may give rise to a "deficiency" of the organism, a vulnerability to harm, a constitutional weakness; that at times serious affections, such as arthritis may occur on the basis of such an inactive and unrecognized infection. Given a sufficiently severe blow to the organism, such as an attack of influenza, overwork, distress or other strain, and the bacilli which have been held in check may be liberated, invade the circulation and give rise to an acute attack of tuberculosis. This has been observed only too often after tonsillectomy, for instance, or after other operations.

In other instances, focal infections are responsible for a state of ill-health the cause of which is not recognized by any of the customary clinical modes of examination; unless specific reactions are produced by diagnostic injections of bacterial vaccines. Of course, the physician will investigate the conditions of tonsils, of gums, lymph glands and other possible foci of occult or active infection, as a matter of course. If he finds trouble, he will take steps promptly to remedy it—usually, with decided benefit to the patient through a marked diminution of the symptoms of ill-health.

—

In matters of diagnosis, the methods and instruments available have become so numerous that it is difficult to practice all the important ones of them consistently. There is danger, moreover, to yield to fads and to attribute undue importance to any such measures. The reading of blood pressure determinations, for instance, has been much overdone. Still, that method often is of great value and affords very important information. Blood counts, serum tests such as the complement-fixation test, and others, all have a definite place.

One new diagnostic test, of benefit in infectious diseases, is the utilization of the reaction following the injection of a corresponding bacterial vaccine. Needless to say, it takes experience to learn how to evaluate the meaning of such reactions; but there is nothing in medicine that can be learned and mastered without experience.

—

Bacterial vaccines, too, have come to fill an important and a justified place in modern therapeutics, irrespective of the cheap jests of some outsider reformers and muckrakers who amuse themselves by accusing physicians of using vaccines for broken legs. The indisputable fact is, that bacterial vaccines have revolutionized the treatment of infectious diseases and have made it possible to shorten their course and to lessen their severity. No matter what may be declared solemnly from the professor's desk or in cut-and-dried textbooks, there is hardly a physician, be he general practitioner or professor, who would venture to act upon the assertion, for instance, that pneumonia is always a self-limited disease and that no treatment can modify the course or the outcome of an individual attack in the slightest. We may subscribe to such a (silly?) assertion academically [We do not!—Ed.] but, when it comes down to brass tacks, we *treat* our patients as best we know how, and most of us will resort to the prompt employment of "specific," that is, bacterial remedies.

—

With regard to constitutional diseases, many changes have taken place in our views during

the last thirty years. With regard to diabetes, for instance, it has been realized more fully than before that it is a disturbance of the metabolic processes involving the entire system and not localized in any one organ. The outstanding sign, that is, the elimination of sugar with the urine, is but a subordinate symptom and may be employed only in a limited manner, as a criterion or a guide as to the process of the disease or the progress of the treatment.

In nephritis, we have realized that, very often, the inflammation of the kidneys is based upon a localization of bacteria. On the other hand, it must be admitted that mechanical injury through overwork can determine irritation of the secreting tissues, bringing about inflammation in that manner.

In rickets, present-day views are radically different from those of thirty years ago or even of five years ago. It is being appreciated now that rickets is by no means a deficiency disease, that it is not produced by faulty feeding but, rather, by insufficient sunlight.

Cancer has become one of the most puzzling and most closely studied affections. The surgeons, who occupied the front of the fight against cancer, still claim that evidences of this trouble must be removed. However, voices are becoming very insistent that show operable cancer lesions to be really effects and end-products and prove that cancer is far more a medical than a surgical disease.

One of the most important advances that may be recorded consists in the intensive study of the venereal diseases and in the merciless campaign that is being waged against them. With the discovery of the Treponema pallidum, the origin and nature of syphilis has come to be understood more clearly. Chemotherapy has enabled us to treat it radically; not, it is true, by arsenic alone but by a combination of arsenic and mercury. In gonorrhea, chemotherapy combined with specific bacterial treatment has shown splendid results and the difficulty is only to bring people to a realization of the urgent necessity to treat chronic affections persistently. Finally, prophylaxis has come to occupy an important place and the hope is justified that, in course of time, the venereal diseases may be curtailed greatly, provided the cooperation of the public can be secured.

—

Thirty years ago, we had barely conceived the importance that the thyroid gland may possess for the well-being of the entire organism. It was not until a bare twenty years ago, that the whole chapter of endocrine glands, or hormology, hormotherapy, etc. was opened up through the fundamental studies of Sajous. Today, the physician who would leave these important and puzzling structures out of consideration in the study of his patients, would often deprive himself of valuable diagnostic hints; if he were to refuse the employment of endocrine remedial agents, he would inevitably remain behind his fellows in the successful practice of his calling.

Not that these organs are fully understood or that hormotherapy is absolutely and completely established. Much of it is empirical. We are glad that it is so. Without empirical methods, we contend, there can be no progress. If ever the day comes when empirical methods are no longer employed, when we know everything that is to be known, there will be more than an arrest of progress; there will follow retrogression, and the deluge.

—

In matters of sanitation, the last thirty years have shown a notable advance. Despite the denials of open and hidden foes of medicine, the efforts of sanitarians, mostly physicians, have brought about a marked diminution in the mortality and, often, the morbidity of infectious diseases. Diphtheria, typhoid fever, are not nearly as frequent nor are they as fatal as they were thirty years ago. Tuberculosis has had its tribute from the human family cut almost in two. True, there are the new aspects and forms in which influenza makes its appearance. However, it would be unjust to lay that to the charge of the medical profession. We believe that the numerous unfavorable circumstances attendant upon war time are responsible for most of the epidemics of this and some other plagues that have afflicted mankind in the last six years or so.

—

There may be recorded a commendable desire on the part of the lay public to be informed in matters connected with health; to learn how to live so as to prevent disease and how to live in physical comfort. This laudable desire has induced numerous health fakers and charlatans of fragmentary and often incorrect education to offer much misinformation and, no doubt, lead many astray—to the injury of those poor victims. In the end, these false prophets will not be able to maintain themselves. Physicians will in time realize that they must fit themselves to transmit the required information and teaching and that they are entrusted with the responsibility of guarding the people's health.

—

What shall we say of Christian Science, the Emanuel Movement, Freudism, New Thought,

and, last but no more least than any of them, Couéism? What is new in most of their teachings is not true; and, what is true, has been practiced by physicians from time immemorial, though, we admit, not always deliberately or with as full understanding of facts as is being developed gradually.

What will the next thirty years bring? Many of our readers will be here to see. For our part, we shall be satisfied to write *Finis* whenever there is no more work for us to do.

Knowledge is proud that he has learned so much; Wisdom is humble that he knows no more.—Cowper: Task.

PUT YOUR SHOULDER TO THE WHEEL

With this issue of CLINICAL MEDICINE starting a new volume—the thirtieth, by the way, and which is the first of the New Year,—resolutions are in order. We were particularly pleased to receive the following cordial note from our friend of many years, Dr. W. E. Neiberger, Bloomington, Illinois.

"As your thirtieth anniversary number of CLINICAL MEDICINE is near at hand, I wish to assure you of my continued appreciation and support. This peerless journal, along the special lines of its activity, has no competitor in America."

We have reason to think that a good many of our subscribers share Doctor Neiberger's good opinion. Unfortunately, but few of them take the trouble to tell us so. Yet, has it ever occurred to you how much you like being told that your work is appreciated and approved of? Do you ever realize how pleased you are if somebody expresses active and cordial appreciation? If you have—we feel just the same way!

Not that we want a greenhouse full of bouquets. It would be so much nicer if our subscribers would show their approval and their appreciation of CLINICAL MEDICINE by realizing that it is their own journal, and that it is up them to keep it a good, useful journal. It is so very easy to keep on, month after month, *reading* CLINICAL MEDICINE as it comes to your desk, taking out the good points, remembering them in your work, benefiting from them and, perhaps, say casually—"I got that out of CLINICAL MEDICINE; good stuff!" If you always receive benefits and never confer them, do you think you are acting quite fairly?

In our opinion, the staff of contributors to CLINICAL MEDICINE consists of all subscribers of the journal. We want all of you to contribute, to tell us when you have something worth while to discuss, what you do not agree with or approve of; perhaps to commend something that struck you as particularly happy and true.

Years ago, when the present writer first became associated with the late Dr. Abbott, the latter said to him: "When you read a particularly good, or useful, or interesting, or well-written article in a medical journal, write and tell the author about it. It will make him feel good; it will make him your friend, and it will help you, yourself, if you appreciate the efforts of others—tangibly." It was a good thought and a bit of advice worth following. Approval, expressed generously, incites to greater effort, to better work. Let us remember that.

Let's make a New Year's resolution: That we, all of us, shall pull together to make CLINICAL MEDICINE, in particular this thirtieth volume of CLINICAL MEDICINE, the best ever. We want a lot of good articles and letters. We want active and animated discussions. We want a live journal that is so much alive that it scintillates. We truly want it to be the best journal for the practitioner of medicine.

Help us to make it so!

THE AVERAGE ANNUAL INCOME

In one of his daily editorial talks, Mr. Arthur Brisbane has the following to say:

"Statistics show that the average American farmer will get this year a net income of $465. That's a little better than $1.00 a day. It isn't the pay of one man alone. It represents the earnings of himself, his wife, and children. It is the pay for getting up before daylight and working until after dark, in the mud of the barnyard. in the cold of the windy fields where late husking is done. No wonder there is a big 'farm bloc' in the Senate. It is needed."

A net income of $465 for the farmer and his wife and children, representing pay for work done by all of them, is a good bit less than the $700, more or less, that is repeatedly mentioned as the average annual income of practitioners of medicine or of the stipends that are doled out to ministers of the Gospel. It seems incredible that such conditions can be permitted if we compare them with the statistics emanating from certain government offices, according to which a minimum of somewhat over $1,200 a year is considered the least amount on which a man can maintain his family decently. The thought intrudes itself upon us that this last figure was arrived at with a view statistically to determine the minimum earnings of laborers, especially members of labor unions; it being held politic and diplo-

matic in many quarters to coddle labor unions and to appease them in every possible way.

If we consider that, just recently, we, personally, had to pay to plasterers working on a house now going up almost $25 a day, that carpenters, steam fitters and brick layers and even hod carriers earn veritable salaries, and for long have ceased to work for mere "wages," it strikes us that not only members of the profession but also those of the oldest of all callings, the farmers, are treated rather shabbily and are decidedly discriminated against by a benevolent commonwealth.

There is something wrong somewhere when such conditions can exist.

What is to be done about it?

A man who does not learn to live while he is getting a living is a poorer man after his wealth is won than he was before.—J. G. Holland.

AMERICAN EDUCATION WEEK

Two years ago, Dr. P. P. Claxton, former Commissioner of Education, instituted the observance of the first week in December as "Education Week." The American Legion, in 1921, became interested in the perpetuation of such a week and took the initiative in inviting the National Education Association and other organizations to cooperate in the observance of "American Education Week." In 1922, the United States Bureau of Education cooperated with the American Legion and the National Education Association in inviting every American organization, club, church, school, newspaper, magazine, theater and individual and bodies of every description to participate in making the week from December 3 to 9 a real nation-wide revival of educational enthusiasm.

For that occasion, the Department of the Interior, Bureau of Education, at Washington, D. C., published a large sheet containing "copy" for the use of the press. From the numerous articles appearing on that sheet we quote a few titles: "Educational Rights of Children." "Inequality of Educational Opportunity and School Support." "Teachers' Salaries and the Cost of Living." "Educate your Children!" "Parent-Teacher Associations." "Juvenile Delinquency." "Education and the Ballot." "Over $3,000,000,000 Needed for School Buildings." "Illiteracy in the United States." "Americanization of the Foreign Mother." "The Kindergarten as an Americanization Agency." "Democracy and Education." "Education and Wealth."

All this is mighty fine and deserves general popular support. Aside from this movement for bringing about a more thorough general education of the American people, we might refer to a movement that has been maintained more or less energetically for a few years and that received a strong impetus in 1922. We refer to the campaign for popular education in matters relating to the health of the people and of the public.

The campaign against tuberculosis, the campaign against cancer and that against venereal diseases are important factors in this movement for popular health education. The custom of certain daily papers employing physicians to discuss matters of health and ill health is another agency that works much good in some instances, while, unfortunately, in other cases harm is done when the medical consultant is not qualified to give advice.

It is a fully recognized fact that, for a number of years, the public has awakened to the importance of health education, and we may conclude justly that the general unrest as regards the popular attitude toward the various healing agencies is due as much to the desire of the people to learn as it is to the deliberate attempt of irregular cults to invade and absorb the healing field.

Various movements were started during the course of 1922, looking to the observance of National Health Weeks, with which was to be associated the publication of numerous instructive articles dealing with health problems in general and also with specific diseases.

A further important factor in this movement for general health education became active in the health and sanitation expositions which were held in Chicago, during Pageant of Progress Week, in 1921 and 1922. Quite recently, a further step has been made in the announcement of at least three health journals which address themselves to the public and which set themselves the task of instructing the people individually and collectively in matters of health that should interest them and that they should become familiar with. These three journals are:

Hygeia: A Journal of Individual and Community Health, the first number of which is promised for April, 1923 (to be ready in March), and which is announced as a scientific medical magazine for the public. It is to be published by The American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

In an editorial on the subject, *The Journal of the American Medical Association*, December 2 (p. 1932) says that the first number of this magazine will mark what, it is hoped, will

prove to be another great step in the service which the American Medical Association is rendering to the medical profession and to the people of our country.

"Aside from the utilitarian aspects of the title *Hygeia*—its brevity, ease of pronunciation, simplicity and attractiveness—it is symbolic of the very foundation of medical science and preventive medicine. The name signifies the purpose of the periodical; to interpret medical science to the public; to inform the layman concerning the fundamental facts of physiology and pathology; to keep him in touch with the advance that scientific medicine is making in the prevention and alleviation of disease. By its physical form, its attractiveness, its interest and its practical value, *Hygeia* should appeal to the lay reader as a publication worthy of his attraction."

The second publication of this kind is *Health*, which also aims to do what has been discussed for years in our medical societies, namely, publish a magazine on health that is scientifically accurate but written in newspaper English and copiously illustrated. The promoters of *Health* hope to make it of great educational value by telling the people in an interesting way the facts regarding health and disease. *Health* is published by The Home Publishing Company, Inc., Room 208, 106 W. Randolph St., Chicago. Dr. Frederick R. Green is the chief of the editorial department.

The Nation's Health, published by The Modern Hospital Company, Inc., at 22 E. Ontario St., Chicago, has, for some years, offered service to sanitarians, visiting nurses and other health workers throughout the country. It announces that, in fulfilment of its original plan, this magazine now enters upon an era of broader journalistic service as a publication devoted to community, industrial and institutional health problems. *The Nation's Health* devotes special attention to the public health field and to public health matters. It aims to make possible the correlation of all that is representative in the contributing sciences and the presentations in their broader relationship of the problems of administration through which preventive medicine is made to function in the interest of public health.

If we want to be truly modest and humble, we must acknowledge that, as a general rule, we, as physicians, are not as well equipped to teach the people as we might be. We may be able to tell our students or young colleagues of some phenomena, of symptoms, abnormalities and so forth, and we usually get away with it—if we can use technical terms. Time was, when we could do the same and could impress our patients by talking to them in what might be called the medical language. The people no longer are satisfied with that. Very often, they react to our pompous explanations by requesting to be told the same thing in English and, then, we are exceedingly prone to stumble, to hem and haw, and we find ourselves unable to give the desired information in simple sentences.

Yet, physicians should be able to teach their patients. That is one of their duties, and it is by no means the least important one. We believe that these popular health magazines that we have mentioned will accomplish much good work. We hope that they will force us, you and me, to formulate our thoughts, our conceptions and ideas, in such a manner that we can "deliver." What I mean is, that we on our part can study these magazines for the purpose of "boning up," so that we may be able to tell the people what they want to know in a form which they can understand.

It is true that there are many things, not always medical, that can not be popularized; that will always remain technical and will be within the special province of trained physicians. It is equally true, though, that there are numerous things in medicine that should be popularized and that can not be taught and preached too simply and too plainly. Let the people once become instructed truly, correctly and sensibly in health matters and they will soon realize that, after all, the medical profession is the real guardian of the people's health and the only competent agency to deal with the cure of disease. A genuine popular education in health matters will ultimately deal a death blow to the various irregular cults, because it will bring people to see that these irregular practitioners deal in assertions and opinions rather than in facts and that they can not make good in spite of their vociferous and loud-mouthed claims.

In order to make a success of life, one has to have some trouble.—T. H. Standlee.

THE REJUVENATION OF MEDICAL ETHICS

In an impressive article contributed to the *Journal of the Indiana State Medical Association* for December 15, 1921 (p. 422), Dr. Frank B. Wynn cites ten commandments of medical ethics which we may well take to heart and a close observance of which would go far toward solving the difficult problem of medical ethics. It seems to us that the question of medical ethics would be a perfectly simple one if we could only bring ourselves to go back to first principles. Observe the Golden Rule:

deal with your neighbor—with anybody with whom you come in contact—as you would want him to deal with you, and the rest follows logically. If everybody were to obey that rule, there would be no need for laws, for prisons. Very soon, even institutions for the sick would become less. We do not mean to claim that the observance of the Golden Rule would remove sickness, but we do assert that it would diminish its frequency. There are a great many consequences that would follow and that would make this world a mighty delightful place to live in.

Unfortunately, we are, at the present day, further from the Golden Rule than ever before. For that reason, we must resort to makeshifts. We reproduce Doctor Wynn's ten commandments of medical ethics, believing that it will be well for us, meaning the whole medical profession, to observe them.

1.—*Reverence and Responsibility.*—Remember thy Creator in the days of professional youth. Bow reverently before the wonderful human body, sick or well, as thou wouldst before a sacred shrine, conscious of thy high duty; resolved to serve to the best of thy power, whether the patient be black or white, prince or pauper, saint or degenerate.

2.—*Historic Appreciation.*—Honor thy father and thy mother. Likewise give praise to the fathers in medicine, whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not prejudice, coming of the past, blind thy vision to the newer truth of medical advancement.

3.—*Keeping the Faith.*—Thou shalt not worship the graven images of false practice—of avarice and selfishness which eat at the very heart of medical idealism; of clever artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

4.—*Inviolable Confidences.*—Thou shalt not disclose the secrets confided to thy keeping by trusting patients unless they be of criminal or treasonable import. Nor shalt thou abuse the professional intimacy granted to thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

5.—*The Sanctity of Life.*—Thou shalt not hazard life unwarrantably; neither shalt thou shrink before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy except if, after due consultation, it is deemed advisable for the larger saving of life. Suffer not death to come through neglect in care of the sick, nor from failure in reading, study and counsel to gain the greatest benefit for the patient.

6.—*Professional Cooperation.*—Thou shalt not bear false witness against a worthy professional brother, but seek ever to protect his good name from calumnious attack by misinterpreting laymen [and colleagues—more's the pity!—Ed.] Of thy knowledge give him unstintingly, counseling and cooperating for medical progress.

7.—*Gentlemanly Conduct.*—Thou shalt not prate of cases nor countenance unseemly boasting of thy achievements in the lay press. Always be a gentleman. Let thy conduct be reserved but without cowardice; courteous but free from flattery; dignified but of warm heart; tender in ministration but firm in command; clean of body, speech and mind.

8.—*Honesty in Business.*—Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. As a laborer worthy of hire exact fair compensation, but by open methods and with conscience void of offense toward thy fellowman.

9.—*Obligation to One's Own.*—Take heed of the morrow for the sake of thine own flesh and blood. Therefore, shalt thou keep orderly accounts, collecting from the full-handed just recompense for services rendered. To the poor and the families of deserving colleagues, thou shouldst account it a privilege to render faithful attention.

10.—*Personal and Public Service.*—Remember thou art thy brother's keeper—physically in the measures and remedies advised for the prevention, alleviation or healing of disease; spiritually in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou show thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist "My cup runneth over," thou wilt at least be sustained by the reflections of "a workman that needeth not be ashamed."

In this world the inclination to do things is of more importance than the mere power.—Chaplin.

A TRUE VACATION

In the "Chicago Health Bulletin", we find the following letter from a Kansas citizen to the editor of his local paper:

"I wish to thank the city authorities for quarantining my family and me for three weeks recently, because one of them had the smallpox. During that time, my wife caught up with her sewing; we had three square meals a day, as no

one came in and she was not permitted to leave; we enjoyed three weeks of good nights' sleep; and best of all, a cousin with four children who had arranged to visit us, saw the smallpox sign on the door and left town so scared she will never come back again."

To this, Mr. Arthur Brisbane adds:

Possibly ironical, but highly suggestive. Think of three inexpensive weeks in which to catch up with your family, your work and your soul! In the line of a real vacation, what has Palm Beach to offer in comparison? And all at the price of a little contagion.

A drop of ink may make a million think.—Byron.

A SINGLE STANDARD FOR ALL WHO TREAT THE SICK

The Supreme Court of Illinois, in its decision declaring the Illinois Medical Practice Act of 1917 void because the Act discriminated against "one class of physicians," was impelled by the logic of the situation to add: *"We are not prepared to hold that requiring four years' professional education before a Chiropractor or Osteopath is allowed to practice his profession is unreasonable or unjust."*

The Supreme Court of Ohio adds this jolt to the chiropractors' contention that they do not need to know a great deal in order to treat human ailments: *"As the body politic is sometimes found to be in possession of undesirables foreign to our government and our public welfare that require immediate and drastic deportations to other shores, so the physical body is not infrequently found to be in possession of some foreign growth whose immediate removal is indispensable to the health and life of the patient. To say that such knowledge in no way pertains to the treatment of the chiropractor is sheerest nonsense, even to a layman."*

It is something infinitely worse than *sheerest nonsense* to any *layman* afflicted with tuberculosis of the bones of the spinal column, or an irreducible strangulated hernia to be treated by spinal *adjustments.* It is criminal ignorance rather than *nonsense* to treat diphtheria, syphilis or malaria by any *drugless* method whatsoever. The itch can be *treated* by manipulation, but it takes sulphur and grease to *cure* it.

Treatment for any diseased condition can not be chosen until it has been determined *what ails the patient.* Finding out this all-important fact requires a thorough knowledge of the human body *in health and in disease;* and this thorough knowledge can be had in just one way and that *one way* is, through years of close application to study by persons who have learned *how to study.*

The *practice of medicine* is founded upon the wisdom of all men and the science of all time. The practice of the medical *cults* is founded upon some fantastic theory of disease devised and invented by some single individuals, and its practice consists solely of one and the same treatment for every complaint.

The children of men have the right to be born and, being born, the children of men have the right to live and grow, to enjoy health and happiness. These fundamental rights are best conserved by compelling all who deal with the health and lives of their fellow beings to come armed with *high* educational qualifications as a prerequisite to the *high* privilege they seek.

Let there be one high scholastic plane of approach to the position of arbiter of human life. Let the door to the temple of healing be closed to the money changers!—[From *Bull. Chicago Med. Soc.,* Nov. 25, '22.]

THE ORGANIZED FIGHT AGAINST QUACKERY

The Secretary of the Illinois State Medical Society recently addressed the members of that society on a matter that has become one of urgent and immediate importance and which the medical profession no longer can afford to ignore. Altogether too long have regular physicians been content to close their eyes to existing evils through which not only their own pocket-books were seriously robbed, but also because of which the public suffered, since, in many cases, a foolish and ill-advised resort to socalled drugless methods of healing caused the loss of valuable time during which loss of life and health might have been saved.

The letter to the members of the Illinois State Medical Society might well have been directed to the medical profession at large. For this reason, we reproduce a portion of it herewith:

"The medical profession has lost caste with the public as the physician and the people have been forced apart until they are out of touch with each other. Recognizing this, leaders in the medical profession are casting about for remedies. In 1922, at the St. Louis meeting, the A. M. A. passed resolutions to proceed upon an educational campaign for telling the public what medicine has done and is doing now for humanity. Several of the state societies have pursued a similar path. At its meeting in June, 1922, the Illinois State Medical Society passed a resolution to the effect that the House of Delegates of the Illinois State Medical Society go on record as endors-

ing a broad plan of publicity through pamphlets, addresses and the lay press, any or all, to the end that the public be enlightened on the truths and principles contained in the development, progress and present status of medicine in order to counteract the advertising propaganda of the many sects who claim superiority in methods of healing over those of established medical practice.

"The Council of the State Society, at its September meeting, gave the matter thorough consideration to the end of carrying out the recommendations of the House of Delegates. A committee was appointed to execute the instructions of the Council in devising ways and means to educate the public to the dangers of medical practice by the untrained and uneducated. This committee was instructed to prepare and to supervise matter that is to be printed in daily and weekly hometown newspapers, both English and foreign language periodicals throughout the state.

"These articles will open the eyes of the people as to the progress of medical science and the consecration of the profession to humanity's welfare. THEIR CONTENT WILL IMPRESS SPECIFICALLY UPON THE PUBLIC THAT A SICK MAN NEEDS A DOCTOR AND NOT A MOUNTEBANK! This propaganda for the lay press will be handled by reliable organizations, skilled in approved methods for securing results from educational publicity.

"Distributive pamphlets and pertinent lectures will aid this press campaign. Through these avenues, general, educative and elucidative, scientific data will be dispensed to the people. Exploitation of any one individual, or group of individuals will be barred as will all matter of a paternalistic nature. In this campaign the great science of medicine is to be revealed through its works to the people who need this knowledge to save them from quacks and charlatans. This publicity will show the virtues of the real, in contrast to the dangers of the bogus. Further, it will open the eyes of the man who is too ignorant to distinguish medical skill from bunkum, and will clear away the fogs from the minds of those who should know better, but who do not."

THESE CHIROPRACTORS

In connection with the preceding editorial, we naturally are reminded of the arrogant and bold advertising campaign that adherents of the Chiropractic school of "healing" have inaugurated some years ago and are carrying on with an effrontery and a disregard of truth that is startling.

For long, we have intended to say something about this matter. In another department of this issue of CLINICAL MEDICINE, we present two original articles, one by a physician and one by a layman, that both deal with the Chiropractic danger and, at the same time, offer a remedy which might be invoked with almost certain assurance of success.

In the last instance, it is clearly up to the medical profession whether it wishes to be squeezed to the wall or whether it will decide to assert itself and to make impossible the tactics, pretenses and dishonest practices of those blacksmiths, barbers, day-laborers and others who, with barely a common-school knowledge, acquire the degree of Doctor of Chiropractic and offer to treat disease, no matter of what kind, no matter in whom.

Truly, it is a scandal and the scandal is the greater in that the medical profession has permitted it to continue so long. It is high time that we should rise, put down this fraud and eradicate this evil.

The wrestling match was a whirlwind and hotly contested affair. Every fan near the ropes was on his feet wild with excitement and yelling with every ounce of lung capacity—all but one frail little man, who was sitting totally oblivious to both the bout and the bedlam in the attitude of a man who is vainly trying to recall something.

Finally, with a hopeless sigh, he looked up and glanced casually at the wrestlers. Then he sprang up and elbowed his way through the crowds.

"The Chiropractor"! he shouted wildly. "That was it! I have an appointment with the Chiropractor!"

EDUCATIONAL PIONEERING FOR CHEMO-MEDICAL RESEARCH

Within the first four years of its existence, the Chemical Foundation has devoted more than a quarter of a million dollars to educational work that was designed to pave the way toward popular appreciation and support of chemo-medical research and to impress the whole American people with the possibilities of saving human life and health that lay along this path of progress. It has been instrumental in aiding a group of eminent scientists in this field to prepare a report, outlining what may be accomplished by such cooperative research, and by printing and placing this document in the hands of a million intellectual leaders throughout this country. By contributions to the National Research Council, the American Biological Society, and other organizations, it has been able from time to time to stimulate activities along these lines.

Following the appointment, by the American Chemical Society, in 1919, of a committee of pharmacological, chemical and research authorities, the Chemical Foundation made arrangements for extended study of the future possibilities of chemo-medical research through this committee, as well as the compilation of a report designed to carry to the general public the results of its investigations. "The Future Independence and Progress of American Medicine in the Age of Chemistry—A Report by John J. Abel, Carl L. Alsberg, Ray-

mond F. Bacon, F. R. Eldred, Reid Hunt, Treat B. Johnson, Julius Stieglitz, F. O. Taylor and Charles H. Herty" was the outcome of these activities.

Eighty thousand dollars has been spent on the preparation, printing and distribution of this pamphlet by the Chemical Foundation, with the results that its contents have become familiar to medical men throughout the country and have aroused the interest of more than a million leaders in intellectual, social and financial life in every locality. Thousands of letters expressing enthusiastic support of chemo-medical research, as outlined for the future in this report, have been received from all classes of persons, in every state. The workers of the Chemical Foundation believe that, in this way, an enduring foundation for public appreciation of research in this field has been laid throughout this nation.

In addition to its educational campaign on behalf of chemo-medical research, the Chemical Foundation has been able, during the past few years, to support valuable work on the standardization of biological stains in cooperation with the American Biological Society, as well as to aid in continuing the publication of the "Journal of Physical Chemistry," at Cornell. It has pledged $25,000 to enable the American Chemical Society to continue its very valuable publications and assisted the National Research Council by financing a survey of chemical facilities in American colleges and universities, as well as a compilation of a table of constants, representing some ten thousand dollars in expenditure.

For the future, the Chemical Foundation intends to make every possible effort to bring to the people of the whole country a knowledge and appreciation of the benefits that they must derive from the splendid scientific labors of chemo-medical research.

L. Y. M.

DON'T FORGET CALCIUM SULPHIDE

The world of medicine is moving so fast that, sometimes, we forget useful drugs that were efficient ten years ago and still remain the best of their kind for the treatment of certain diseases. Just now, I am thinking of calcium sulphide which, for the common contagious diseases, such as measles, scarlet fever, whooping cough and even smallpox is, in my humble opinion, without a peer.

These remarks were inspired by the receipt of a letter from our old friend Dr. Carlos F. Secord, formerly of Guatemala but now of Omaha. In a personal letter from him, I find the following paragraph:

"It is interesting to state that one of the influential Indian chiefs has come to this country to persuade me to return, he acting as representative of others. There is at present an epidemic of smallpox in Guatemala, and he also asked me to give him medicine to combat it. I was so remarkably successful, some years ago, during a tremendous epidemic down there (during which we vaccinated some fourteen thousand people and treated many hundreds), and they have not forgotten it. They never forget anything. My treatment was: First, a heavy podophyllin purge; next, pilocarpine sweat; finally, calcium sulphide and rhus tox, to effect. Results: called magical; many cured even after their coffins had been made and placed at the bedside."

The efficacy of calcium sulphide in these virulent infectious diseases has been attested by many general practitioners and, especially, by medical missionaries in Turkey, in Syria and elsewhere, who observed the remarkable action of this remedy under otherwise very unfavorable conditions and environments. The habit of prescribing calcium sulphide "to effect and then to maintain saturation" is a good one to acquire.

A Happy

and

Prosperous New Year!

Leading Artieles

Chemotherapeutic Developments in the Treatment of Syphilis

By GEORGE W. RAIZISS, Ph. D., Philadelphia, Pennsylvania
Contribution from the Dermatological Research Laboratories of Philadelphia

EDITORIAL COMMENT.—The three modern methods of therapeutics that intrigue us most and that are being investigated with the greatest degree of devotion at the present time are, immunization (both active and passive) by means of the injection of foreign proteids, especially bacterial; then chemotherapy—which is not modern at all, but has recently entered an astonishing successful phase of development; and, third, organotherapy. With regard to chemotherapy, to which CLINICAL MEDICINE *has not devoted as much attention in the past as to the two other forms of therapeutics, Doctor Raiziss presents herewith a historical study which is highly academical, it is true, but which also is very instructive. We are happy to be able to publish Doctor Raiziss' paper, feeling certain that our readers will be keenly interested in it.*

EITHER in the elemental condition or in the form of organic or inorganic compounds, mercury has been employed by physicians in the treatment of syphilis from the time when the disease was practically first recognized and described. It is amazing to note that, in the literature written about 400 years ago, there were suggested therapeutic measures and methods of treatment with mercury which are very similar to those employed at the present time. Mercury was practically the only remedy employed in the treatment of spirochetal infections from the early part of the 16th century until the beginning of the 20th century, when a pentavalent organic arsenical, known as "Atoxyl", or the sodium salt of p-arsanilic acid, was recommended by Ferdinand Blumenthal, in the therapy of syphilis. Although favorable results were obtained with experimental animals, it could not be employed in syphilis on account of its untoward effects upon the general health of the patient.

In consequence of the phenomenal results obtained with organic arsenical compounds, particularly with the arsphenamines introduced by Paul Ehrlich, about 1909, mercury assumed a position of secondary importance in the therapy of syphilis. At the present time, the most satisfactory results are obtained by the intravenous administration of arsphenamine or neoarsphenamine in conjunction with intramuscular injections of various mercurials, administered between successive injections of the arsenical. In this procedure, the mercurials serve to reinforce the action of the arsenicals and also to prevent possible relapses.

Mercury Preparations

The brilliant successes, which attended the chemotherapeutic investigations of organic arsenicals, stimulated a great number of investigators who endeavored to achieve similar results with organic mercury compounds. Thus, Schilling Von Krogh, Schrauth and Schoeller[1] carefully investigated the action of various organic mercurials in chicken spirillosis, while F. Blumenthal and his coworkers elaborated a product called "Toxynon", the sodium salt of acetylaminomercuribenzoic acid, which proved to be of little value in the treatment of human syphilis[2].

Kolle and Rothermundt[3] recommended a sulfamino-antipyrene mercury compound which they called "Argulan." They claimed it to be less organotropic than other mercurials, and exhibited favorable effects in the treatment of human syphilis, when suspended in oil and injected intramuscularly. Hahn and Kostenbader[4] studied the pharmacological, physiological and therapeutic properties of a number of dyestuffs combined with mercury, which included mercury-phthaleins, mercury-anthrochinons and mercury azodyes. Although they claim to have obtained very favorable results, none of their compounds found application in practical therapy. In 1922, Edwin C. White, J. H. Hill, J. E. Moore and H. H. Young[5] reported favorable results in the treatment of syphilis with the disodium salt of hydromercurifluorescein,

which they called "Flumerin". The authors emphasized the fact that their drug is much less toxic than the ordinary mercurials, that even in large doses it causes little or no clinical injury to the kidneys of animals and, in ninety-six human cases, definite proof of its value as an antisyphilitic drug has been found.

Very recently, "Mercurosal", a mercury derivative of o-carboxyphenoxyacetic acid, has been elaborated and dispensed for the treatment of spirochetal infections. According to the producers, "There is abundant evidence that Mercurosal possesses high spirocheticidal value and that its administration, either intramuscularly or intravenously, is not followed by untoward symptoms." Cole, Driver and Hutton[6] found that the comparison of this drug with red mercuric iodide by the injection route, and also with mercurial ointment, demonstrated in several instances that the latter two remedies had at least an equal, if not a superior, antisyphilitic therapeutic action. They also claim that the drug had far from the high spirocheticidal value which the printed data of its manufacturers led them to expect.

The Author's Studies

For the past eight years, the author has been engaged in the chemotherapeutic study of many organic mercury compounds, for the purpose of preparing an organic mercurial which would not only have a specific destructive effect upon protozoan organisms in general and upon the spirochete of syphilis in particular, but one that could at the same time be safely administered intravenously into human beings in doses larger than those possible with any other known mercurial. A study of various new mercury compounds[7] showed that they could be tolerated intravenously by experimental animals only to the extent of a few miligrams per kilo of body weight, while the trypanocidal effect upon experimental animals infected with Trypanosoma equiperdum (the parasite of "la dourine", or horse syphilis) was either very feeble or entirely negative. On the other hand, the organic arsenical compounds exhibit a very marked trypanocidal activity. It has been claimed by some investigators[8] that the beneficial effects of mercury in the treatment of syphilis are not the result of its direct influence upon the spirochetes, but of its stimulation of antibody production. Recent investigations of Toyama and Kolmer, however, do not bear out this theory[9]. The failure of the development of valuable organic mercury compounds is due either to the fact that mercury is generally less specific for trypanosomes and spirochetes, or to the difficulty of preparation and the instability of mercurials in which both valences of the mercury are attached to the nuclear carbon, as in mercuridibenzoic acid.

Mercury compounds are still valuable as an auxiliary medicament in the treatment of syphilis; but, when used alone, their action is slow and their beneficial effects are uncertain. In addition, the intramuscular administration of mercurials may produce pain, stomatitis, dermatitis, colitis and, sometimes, impairment of the kidney functions, as it is necessary to introduce large amounts of mercury into the human body in order to effect the disappearance of spirochetes in external lesions.

Arsenic Chemotherapy

Ehrlich, Bertheim and Hata were the first to engage in systematic chemotherapeutic researches resulting in the synthesis of numerous new chemical compounds. They were mainly derivatives of "Atoxyl", which was the only aromatic organic arsenical known at the time. After preparing 605 various arsenic compounds, they finally elaborated, in 1909, a derivative many times more powerful than "Atoxyl" in its action upon protozoan infections. This new product, consisting of the dihydrochloride of 3,3'-diamino-4,4'-dihydroxyarsenobenzene, and known as "606", was dispensed under the trade name "Salvarsan", which has since been replaced by the name "Arsphenamine", in the United States. Three years later, a more soluble product, "Neoarsphenamine", was prepared by condensing the amino groups of arsphenamine with sodium formaldehydesulfoxylate.

Arsenic belongs to the group of elements which may exist in both, trivalent and pentavalent forms. In the first case, it is characterized by its unsaturated condition, in consequence of which its potential reactivity is considerably greater than that of the saturated, or pentavalent, arsenic. The chemotherapeutic investigations carried out by Ehrlich and his associates have established the fact that arsenic in the trivalent condition is a more powerful trypanocide and spirocheticide than the pentavalent element. This evidently indicates that there exists a relationship between the energy capacity of a compound and its destructive influence on parasites. This observation, together with the fact that therapeutically active elements must be linked to nuclear carbon atoms in order to exert their greatest influence upon pathogenic microorganisms, constitutes the most important advancements in modern chemotherapy.

The wonderful results obtained with arsphenamine and neoarsphenamine in the treatment of syphilitics have been definitely established, and the drugs are now employed by physicians

throughout the entire world. In many cases, practically complete cures have been effected by the intravenous administration of either of these two arsenicals in the early stages of the infection, severe lesions being dissipated within a short time after the initial injections. That arsphenamine is superior to mercury, is virtually an established fact. Its superiority is based not alone on the magically rapid disappearance of syphilitic manifestations after its use, nor its success where mercury has failed, nor on the greater influence on the Wassermann reaction, but is supported by laboratory studies on both, animals and men. In addition, there is a considerable latitude of safety between the parasiticidal and curative doses of both, arsphenamine and the neo product, which is not the case with mercurials.

Arsphenamines Safeguarded

Within the last few years, great progress has been made in this country in the perfection of the quality of both, arsphenamine and neoarsphenamine. According to the government requirements, arsphenamine should be borne by experimental animals in doses of 100 milligrams per kilo of body weight, while the tolerated dose of neoarsphenamine should be 200 milligrams per kilo. Most of the American manufacturers, however, have been able to obtain products which are borne in larger doses than the above, some samples of arsphenamine passing at 150 milligrams, and some neoarsphenamine at 400 milligrams per kilo. The margin of safety thus created is very large; for, in accordance with the figures given, a man of average weight could tolerate a single dose of 24 Grams of neoarsphenamine. The dose of the latter actually employed in practice, however, is only nine tenths of a Gram. As a result of these improvements, fatalities following the administration of arsphenamine or neoarsphenamine have been practically eliminated. At the same time, the therapeutic or curative power of the American-made drug has been considerably improved.

Although arsphenamine has, within recent years, attained the leading place in the treatment of syphilis, its condensation product with sodium formaldehydesulfoxylate is often preferred by physicians. This may be attributed to several factors. In the first place, the preparation of a neoarsphenamine solution for intravenous injection is much easier, because the drug is more readily soluble in water and forms a neutral solution requiring no further addition of alkali. Arsphenamine, on the other hand, must be dissolved in water and carefully neutralized with alkali, a procedure requiring time and experience. Another important advantage lies in the fact that neoarsphenamine is more readily tolerated by patients and produces the alarming symptoms or "reactions" to a less extent than its parent compound. In addition, the ratio of the therapeutic to the tolerated dose, i. e., the chemotherapeutic index, is more favorable in the case of neoarsphenamine[10].

Modifications of Arsphenamine

Since 1910, numerous attempts have been made in various parts of the world to produce a compound superior to either arsphenamine or neoarsphenamine and, as a result, there have been elaborated "sodium arsphenamine", "galyl", "luargol", "silver arsphenamine", "arsphenaminsulfoxylate", "sulfarsenol", "sulpharsphenamine" and a host of other compounds. In nearly all cases, the most promising are derivatives or substitution productions of arsphenamine which have not as yet shown any indication of replacing the two parent compounds.

"Sodium Arsphenamine", the disodium salt of 3,3'-diamino-4,4'-dihydroxyarsenobenzene, is tolerated by white rats in maximum doses of 212 to 215 milligrams per kilogram of body weight, but its smallest trypanocidal doses range from 16 to 24 mg. per kilo. Its chemotherapeutic index, however, is only about one-half that of either arsphenamine or neoarsphenamine[10]. This is surprising, in view of the fact that "sodium arsphenamine" is represented as being a solid form of properly alkalinized arsphenamine. In addition, the chemical analysis of various samples of the commercial disodium salt indicate that certain reagents have been added which cause some change in the molecule of arsphenamine, to the disadvantage of the final product.

"Galyl" was first regarded as a new chemical compound formed by linking two molecules of arsphenamine through the amino radicles by means of two phosphorus groups, and corresponding to a tetrahydroxydiphosphoaminodiarsenobenzene. Later, there was elaborated a "new" product, which was supposed to be a sodium salt of the "old" compound linked with five molecules of sodium sulfite. Its manufacturers claimed it to be less toxic than arsphenamine, quicker in its action on spirilla, and of equal therapeutic value. As a result of considerable investigation, it has recently been concluded that the composition of "galyl" has not been correctly declared, that its therapeutic claims are unwarranted, since it has been given a chemical formula which it does not appear to possess, and that the administration of the drug amounts to the administration of a solution of properly alkalinized arsphenamine[11].

"Luargol," a triple combination of arsphenamine base, silver bromide and antimonyl sulfate, was first prepared by Danysz[12]. It is claimed to be very efficacious in experimental cases of Trypanosoma surra and Tr. gambiense, and ten times as active as arsphenamine in sleeping sickness. Very promising results have also been obtained in a large number of cases of human syphilis[13]. It has been found that antimony compounds alone have a beneficial effect in refractory cases of trypanosomiasis and in arsenic-resisting cases of syphilis. In "luargol" the antiseptic properties of arsphenamine are supposed to be increased by the coordinated silver bromide, and further reinforced by the specific action of the antimony.

"Silver Arsphenamine" has attained more prominence than any of the other coordination compounds of arsphenamine base and various metallic salts. Although it was first prepared by Ehrlich and Karrer, in 1915[14], its constitution has not as yet been definitely established. According to these investigators, the silver was regarded as having attached itself to the arsenic, while Binz, Bauer and Hallstein[15] claimed that it was linked in some way to the amino groups. In 1919, Bauer performed a series of diffusion experiments with various arsenicals, from which he concluded that silver salvarsan is a chemically homogeneous substance containing the silver in complex combination[16]. Raiziss and Gavron carried out similar experiments, with silver as well as gold arsphenamine, and found that, while the arsenic passed through the membrane, this was not the case with the metal which was completely retained within the parchment bag. The authors advanced the theory that the metallic coordination products of arsphenamine are mixtures of disodium arsphenamine and a colloidal form of the metal[17].

"Sulfarsenol" is a derivative of arsphenamine in which one or both hydrogen atoms of the amino groups are replaced by a sodium sulfomethyl radicle. It was first described in a German patent,[18] but is at present manufactured in France. Vœgtlin and his collaborators[19] studied two different lots of the drug and concluded that it is well suited for clinical use on account of its great solubility in water, the stability of the resulting solution in air, and the absence of any local irritation following its subcutaneous injection. In addition, they found that its toxicity is about the same as that of an average sample of commercial neoarsphenamine; the trypanocidal power is less, weight per weight, than that of the average neoarsphenamine, and the rate at which its arsenic is excreted is of the same order as observed with arsphenamine and neoarsphenamine.

In conclusion, it may be stated that, despite the numerous researches and investigations in the synthesis of new arsenicals, antimonials, mercurials and bismuth compounds, during the past decade, the two drugs, arsphenamine and neoarsphenamine still rank foremost in the modern therapy of syphilis.

REFERENCES

1C. Schilling, M. v. Krogh, W. Schrauth and W. Schoeller, *Z. f. Chemotherapie*, 1, 21 (1912).
2F. Blumenthal, *Biochem. Z.*, 32, 59 (1911); F. Blumenthal and K. Oppenheim, *Ibid.*, 39, 50 (1912); *Ibid.*, 57, 261 (1914).
3W. Kolle and M. Rothermundt, *Med. Klin.*, 21, 835 (1913).
4B. Hahn and E. Kostenbader, *Z. f. Chemotherapie*, 3, (1914).
5E. C. White, J. H. Hill, J. E. Moore and H. H. Young, *J. Am. Med. Asso.*, 79, 877 (1922).
6H. N. Cole, J. R. Driver and J. G. Hutton, *J. Am. Med. Asso.*, 79, 1821, (1922).
7J. F. Schamberg, J. A. Kolmer and G. W. Raiziss, *Am. J. Syph.*, 1, 1 (1917).
8H. Reiter, *Z. f. Immunitätsf.*, 15, 116 (1912).
9I. Toyama and J. A. Kolmer, *J. Immunol.*, 3, 301 (1918).
10J. F. Schamberg, J. A. Kolmer and G. W. Raiziss, *J. Am. Med. Asso.*, 76, 1823 (1921).
11Abstract of a Report of the Council on Pharmacy and Chemistry, *J. Am. Med. Asso.*, 79, 1706 (1922).
12J. Danysz, *Compt. rend.*, 159, 452 (1914).
13Renault, Fournier and Guénot, *Compt. rend.*, 161, 685 (1915); Dalimier and Lévy-Franchel, *Ibid.*, 162, 440 (1916).
14P. Ehrlich and P. Karrer, *Ber. deut. chem. Ges.*, 48, 1634 (1915).
15A. Binz, H. Bauer and A. Hallstein, *Ibid.*, 53, 416 (1920).
16H. Bauer, "Arb. a. d. Inst. f. exper. Therap. zu Frankf., a. M.," 45-53 (1919).
17G. W. Raiziss and J. L. Gavron, *J. Pharmacol. and Exp. Therap.*, 20, 163 (1922).
18Farb. M. L. and B., "D. R. P.," 249726.
19C. Voegtlin, H. Dyer and J. W. Thompson, *Am. J. Syph.*, 6, 526 (1922).

AN editorial writer says that millions will plan for improvement in 1923. A few will start the improvement now. They—the few—will still be going ahead twelve months from now—every day, in every way, as Coué would say. The only time is now. Much could be done in these last six days—everything in fact, for THE START *is everything, if you keep going.*

Thirty Years of Surgical Progress

By GUSTAVUS M. BLECH, M, D., C hicago, Illinois.

EHEU! fugaces anni labuntur! It seems but yesterday when I began the Herculean task of grappling with the mysteries of medicine, and, today, when more than thirty years have elapsed, I am almost glad of the opportunity to pause and take stock.

Like all human beings, writers on surgical topics divide themselves into two classes—the optimists and the anti's. Given an opportunity like this, the optimist would clap his hands in ecstasy and exclaim: What wonderful attainments I am about to chronicle! The other would shrug his shoulders and refuse to write a line, with a deprecatory: "Don't mention it."

As for myself, I am not supposed to belong to either class. Once they brand you with the label "editorial writer," you are supposed to have no feelings at all, no personal likes or dislikes, no friends or enemies; [Are you, now? We could tell a different story, an' we but would! Ed. A.] in fact, you are supposed to be a good deal like a judge in ermine instead of a human toiler.

Once in a while I (and I am glad to say I, because this is for once to represent my views as an individual, and not as a member of the Editorial Cabinet) feel like rebelling. But, having served in the Army, I have learned to obey as a duty, and, when the opportunity came to command, to command as a duty, without bias or fear, without favoritism, or partisanship.

And so I am of a trained mind to do things, uninfluenced by externalisms. Therefore, when reflecting on the achievements of surgery during a period corresponding to about my entire professional career, I find little cause to reach for the trumpet, nor do I feel justified in skulking in silence.

True, no volcanoes have been subdued and no new worlds discovered, but there has been steady, determined and intelligent plodding, so that we can enjoy traveling in comparative safety and comfort over roads heretofore narrow, rough and uncomfortable.

About three-quarters of a century ago, the famous master Dieffenbach exclaimed that surgery had then reached the very pinnacle of perfection. This eminent scientist condemned hysterectomy as a criminal venture on a par with extirpation of the spleen.

If Dieffenbach could rise today and see young men fresh from college perform hysterectomies and splenectomies as if these operations meant nothing in their young lives, he would doubtless mince no words in condemning those who aroused him from his eternal sleep. If, however, Dieffenbach could be shown real surgeons at work entering the brain, spinal cord, abdomen, etc., and produce physiologic or, better speaking, biologic cures, he would have to admit that there must have been surgical progress of a decided character, to make such results possible.

Let us not forget that, thirty years ago, surgery had reached a scientific basis and technical perfection which would have justified anyone to reject Dieffenbach's dictum, who appears to have spoken a few years prematurely.

Thirty years ago, surgery was already a "humane" art, because it had the means of performing its tasks without causing pain.

Aseptic Technic

The dreaded "hospital gangrene," which had made virtually every important surgical operation a highly probable admission ticket to a ride on Charon's boat, had vanished like mists before the sun, through a purposive antisepsis. Indeed, we had already gone a step forward by eliminating as much as possible the disinfection or sterilization by toxic chemicals and by resorting to thermic measures, which we have come to name asepsis, though the term is not justified etymologically. But, with the recognition that the washerwoman's method of boiling her dirty linen was the method par excellence for the sterilization of surgical instruments and implements, little was left for refinement of aseptic technics, so called. Whether one goes into a modern operating room with glass and metal furniture and vacuum steam sterilizers, or whether one observes a trained and conscientious surgeon at work in a miserable hovel, boiling his instruments in a cheap metal dish over a wood fire and laying them on a wet towel taken from the same dish, the aseptic technic is the same and equally effective, because based on the same scientific principles of germ-destruction by heat and of avoiding infection through contact.

But, in spite of the two great advances, anesthesia and asepsis, surgery still remained full of hazards, and earnest and capable minds have been uninterruptedly at work determined to discover ways and means to make surgical

operations as devoid of risk as human sagacity can attain.

Progress in Anesthesia

The very blessings of anesthesia were not unmixed ones: Ether and chloroform proved very often, too often for comfort, dangerous, nay, even treacherous drugs. Much has been done to transform these two drugs into sleep-producers (narcotics); that is to say, to produce with them surgical narcosis rather than anesthesia. Yet, in spite of the very utmost skill, one still confronts situations, especially in the desperately sick, in which one feels that the anesthetic *per se*, will reduce the already narrow margin of safety.

The administration of ether by the drop method, mixed with air after a preliminary partial narcotization with morphine and atropine, means a decided advance which falls into our period. The introduction of nitrous oxide-oxygen anesthesia means a still farther advance; but that, too, did not come up to expectations, as a mortality directly chargeable to the anesthetic has been unavoidable.

While the advances have been pronounced, we have still to attain the ideal. True, we no longer dread a general anesthetic, since our knowledge and skill guards the patient against sudden and overwhelming calamities; still, in the aged, in the weak and in those suffering from lesions of the circulatory, respiratory and urinary apparatus, we dread the possible after-effects.

Spinal anesthesia, while a method of huge scientific importance, has, unfortunately only a limited application, and appears to be relatively no less risky than general or inhalation narcosis.

Local Anesthetics

Somewhat before our period (1884) we received a valuable addition to our materia medica and surgical armamentarium through the introduction of cocaine, a drug which has a romantic connection with the adventures of Francisco Pizarro, and which was destined to have a revolutionary effect on surgical anesthesia.

Recognition of the dangers incident to the toxicity of cocaine led chemists to search for equally effective and less toxic substitutes, and these have been found in such drugs as procaine, butyn, and others. The non-toxicity or, to be exact, the relative non-toxicity of these chemicals made possible not only anesthesia of small sections of the human body through infiltration, but of considerable portions of the body through nerve blocking. Indeed, this method of anesthesia has been developed to such an extent that it has become a veritable rival to general anesthesia in an incredibly large number of major surgical operations.

It has one drawback and that is, that its practice presupposes familiarity with anatomy and a dexterity in administration not possessed by the general practitioner. While this is hailed with delight by those who would divide the medical profession into surgeons and those supporting the surgeons, it must not be forgotten that the difficulties of technic do not prove a barrier to the practice of surgery, but cause the operator to seek technically less difficult though less safe methods of surgical anesthesia.

Shock and Anociation

In this connection, one cannot but speak with a feeling of pride of the work of an American contemporary on the great problem of shock, Dr. George Crile of Cleveland, Ohio. Our experiences in the past thirty years and the World War have done much to lessen this "*terror chirurgorum*" and, whether one agrees or not with the scientific theories promulgated by that illustrious surgical mind, Crile, we have learned certain practical truths which anyone can practice whose fingers are not palsied by ignorance or natural clumsiness.

We have learned to operate fast, gently and under conditions which will reduce trauma to delicate tissues to a minimum; and, thereby, to reduce shock, so that it appears no longer as that horror of horrors, second in frightfulness only to uncontrollable hemorrhage.

While we are still absolutely helpless when confronted by a case of embolism, terminating human life in a few seconds, our general advances, better technics and gentle operative procedures have tended to lessen infection and thrombosis, both in frequency and intensity, with the result that we see calamities very few and far between.

Position of Surgery Defined

But, perhaps of greatest importance to all concerned is the view which seems to gain headway from day to day, that surgery is not a science with a fence around and with a sign: "Keep out," meant for all internists, neurologists, etc.

The fence has been torn down. Surgery has begun to be looked upon as an integral part of general medical science, having common interests with other disciplines; and, as a result, the borderlines are disappearing and there is a friendly intermingling of the medical neighbors, resulting in councils for the welfare of the patient.

The *furor operativus*, so common in the

early years of this century, has abated. Everywhere can be noted a saner attempt at conservatism. No longer is an abdomen opened on the supposition that a dyspepsia, which lasts over a week, is a sure sign of cancer or ulcer and that both require the surgeon's knife; and no longer is the brain exposed without a definite diagnosis of a lesion decidedly calling for surgical intervention. These two examples are cited merely to typify the modern spirit of surgery.

No general surgeon will perform a cerebral operation without the advice, consent and aid of a competent neurologist, with the result that the possibility of a diagnostic error is virtually out of the question and, furthermore, that an operation can be more purposive and restricted to the properly localized lesion.

Likewise, the general surgeon no longer rushes the patient with a peptic ulcer of the chronic type to the operating table, because he knows that a gastroenterostomy is not the means of a cure, that dietetic and medicinal measures must be continued for some time, and that the internal treatment, as practiced today, produces eighty-five percent of cures. It is only when the competent internist yields the field, that the surgeon has a right to open the upper abdomen in this class of cases.

Per contra, biliary surgery has advanced in that real surgeons no longer are content to do a cholecystectomy or cholecystostomy for gallstones. It is no longer a question, at least not a vital one, whether one merely drains or extirpates the gall-bladder for cholelithiasis. What is of importance is, the doing of a radical operation with a view of ridding the patient of all stones in the biliary apparatus. This involves the ducts, which are frequently overlooked by even socalled specialistic surgeons

If I were to publish the number of operations I have been called upon to perform for "recurrences" of gall-stones, several Chicago surgeons would not be so cock-sure of their importance or skill.

Our progress with carcinoma has been limited, because the research men have produced nothing startlingly new. With a greater tendency to make use of the Roentgen rays and radium as prophylactic measures against recurrences and metastases, our operative results have become more lasting and better.

Greater ante- and post-operative care, the thorough study of the patient with reference to his general health, the prophylactic treatment of the diabetics, syphilitics, nephritics, and hemophilics, the cooperation with specially trained physicians, and the spirit of conservatism based on a keener appreciation of scientific methods, have made surgery during the past thirty years a well-nigh exact science.

There are still untrodden fields, undiscovered lands, hidden problems to be brought to our full grasp; but, as long as there will be a human race, there will be such problems, and need will exist for still greater discoveries.

Thirty years hence, another will write where I left off. If he can say in a few pages as much as I have said for surgery of the past thirty years, the future will not have been fruitless.

So mought it be!

THE age of Martrydom is not the age of thought. The men who can die for a faith are not the same who can investigate it closely, or judge it fairly. The discovery of TRUTH belongs to an age of inquiry; the promulgation and triumph of a CREED belongs to an age of unasking and unreasoning belief. . . . It is only minds which see but a little way that see clearly and fancy they see all. It is only those who see but one side that can feel confident there is no other.

—Greg. "Enigma of Life."

Blindness of Pituitary Origin and Organotherapy

By DR. MAXIMILIAN KERN, Chicago, Ill.
(Eye Findings by Dr. Emil Deutsch of Chicago, Ill.)

EDITORIAL COMMENT.—The study presented by Doctor Kern shows not only careful clinical observation but also studious and searching investigation into irregularities of even those remote functions that might possibly have stood in relation to the manifest trouble. Doctor Kern is to be congratulated on the ingenious manner in which he solved his problem. We feel certain that his paper forms a very important contribution to the difficult subject or organotherapy. Dr. Kern's manifest bias for difficult and abstruse investigations promises well for his future work which we shall watch with keen interest.

CASES of blindness of pituitary origin are comparatively rare; yet, the authors believe, not so rare as one would be led to assume from the scarcity of the literature on the subject. It is not very unlikely that a comparatively large number of such cases are diagnosed erroneously. In view of the fact that organotherapy can accomplish, as it has in our case, the almost miraculous transformation of a hopeless and pitiful case into one of virtually complete cure, it is believed that the problems involved merit earnest study on the part of the medical profession. This applies not only to general practitioners, but to surgeons, oculists and rhinologists as well. We shall submit the case history first, and later comment on the diverse problems.

History of Case.—Mr. I. H. Aet. 31, consulted me July 15, 1922, for severe headaches and for total loss of vision in the right, and virtually complete loss of vision in the left eye, with which he could poorly distinguish between light and darkness.

Family History.—Father died of apoplexy. One sister died of pneumonia. Mother and two sisters are living and well. Further inquiry reveals nothing of interest in the life histories of his antecedents.

Past History.—Patient has been in good health until his discharge from military service, about two years ago. About that time, he began to complain of headaches of an intense degree. He was operated on for ulcer of the stomach (probably gastroenterostomy), but without any influence on the headaches. He consulted a nose and throat specialist who is supposed to have curetted the frontal and ethmoid sinuses; equally without effect on his trouble. He noticed the development of blindness in the right eye, soon followed by gradual blindness in left eye.

The patient gives no history of symptoms or evidences of lues, but states that he had contracted a gonococcal infection several years ago. A purulent urethral discharge reappeared several weeks ago. Patient smokes moderately and has never been addicted to drink.

Physical Examination.—Well-nourished young man. Skin-subicteric. Heart and lungs, negative. Abdomen shows operative scar and is slightly tender to pressure. Genitalia, normal, except for evidence of a chronic urethritis. Pulse and temperature normal. Blood pressure: systolic, 105; diastolic, 60; mean pressure, 45.

Urine negative. Blood Wassermann negative. Blood shows a leucocyte count of 16,600. Spinal fluid, slightly positive to cholesterized antigen; cell count: 12; Russ Jones and Ponti reactions: positive. A Roentgenograph of the skull shows a comparatively large, eroded and indefinite sella turcica and a shadow around the glenoid process.

Eye Examination—July 19, 1922 (Dr. Deutsch).

Right eye: Slight conjunctival infection.

Cornea, anterior chamber and iris, normal.

Pupil: 3½ millimeters, round, no reaction to light.

Lens and vitreous—clear.

Tension—normal.

Fundus—normal, except for slightly engorged veins.

Muscular movements—normal.

Vision—Total blindness. No light perception.

Left Eye: Cornea, anterior chamber and iris—normal.

Pupil—3 millimeters, round, reacts faintly to light, but not to accommodation.

Lens and vitreous—clear.

Fundus—normal.

Muscular movements—slight divergence but no paralysis.

Vision—light perception only nasally.

Examination with Peter's Hand Campimeter reveals a temporal hemianopsia (see Chart 1).

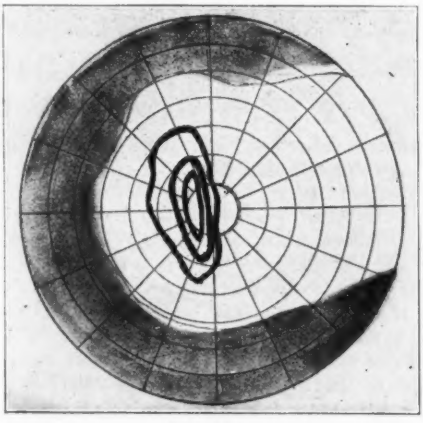

Chart No. 1.

Ophthalmoscopic diagnosis — Retrobulbar neuritis.

The field of the right eye could not be taken on account of absence of vision.

—

The examinations conducted so far have not led to a definite diagnosis as regards the underlying or primary cause of the trouble. The pressure of a temporal hemianopsia reveals the lesion to be in or about the optic chiasma.

We have already mentioned that the x-ray findings are suggestive of a pathologic pituitary body. We desired a thorough and reliable rhinologic investigation to complete our preliminary examinations. The patient was sent to the hospital for further observation.

July 21. — Ophthalmoscopy (left) reveals no change in fundus. Vision unaltered, the field shows again hemianopsia, but a more constricted area. Prognosis, very bad, as the progressiveness indicated beyond doubt the fate of the right eye.

Exenteration of the nasal sinuses (ethmoid and sphenoid) was performed by Dr. Frank J. Novak, Jr., this day.

July 22.—Eye findings unchanged.

July 28.—Field of vision improved greatly. Vision—fingers ten feet.

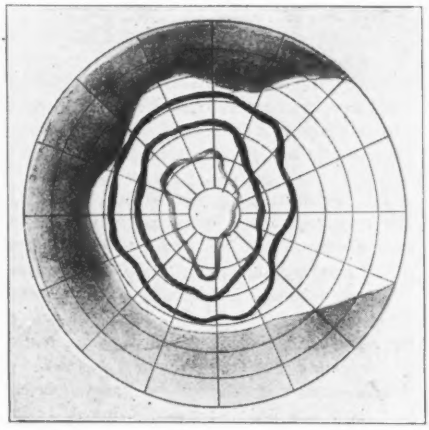

Chart No. 2.

Aug. 2.—Vision—20/100. Visual field shows overlapping of field to the opposite side. (See Chart 2.)

Aug. 15.—Patient complains that his vision is very poor again. Field of vision again constricted to an extent shown on first examination (Chart 3).

Glandular medication, which had been administered since the patient's admission to the

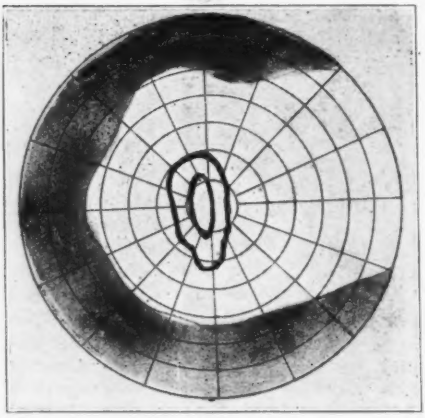

Chart No. 3.

hospital has been withheld for the past five days. To this must be ascribed the retrogression.

Aug. 27.—Patient sees better. Field of vision improved. Glandular therapy has been rigidly carried out, it having been demonstrated beyond doubt that the improvement of the eye, both as to vision and increase of fields of vision, is in direct relation to the administration of glandular drugs.

Aug. 29.—Patient examined at office of Dr. Deutsch. Claims to feel fine. Visual field virtually normal (Chart 4). Vision—20/20. Pupillary reaction active. There still exists some divergence. Examination of the right eye shows optic atrophy with total loss of vision.

Discussion of the Case

The above data appear to be sufficient to convey a good idea with regard to the seriousness of the disease and the astounding therapeutic results produced by organic medication. What the results would have been, had the condition been recognized before total blindness of the right eye had set in, must remain a matter of conjecture, but one is justified in the belief that, even in that eye, the optic atrophy could have been checked and vision restored, as has been demonstrated in the left eye.

If this be so—and there is no cause to assume otherwise—this case is of sufficient importance to invite critical investigation from all angles.

The first and, to us, most important problem presented, is the question of diagnosis. Here as elsewhere, an early diagnosis will lead to early rational therapeusis, be that in the form of surgery or organotherapy, the relative merits of which we shall briefly touch upon later.

Why was not the correct diagnosis made at the time when the loss of vision began to become manifest? Surely, this symptom in itself is of sufficient gravity to compel thorough study and investigation, not only by the clinician but also by an oculist.

While one of us had made the diagnosis with a degree of probability on first examination from the history and negative blood findings alone, certainty was sought and great credit is

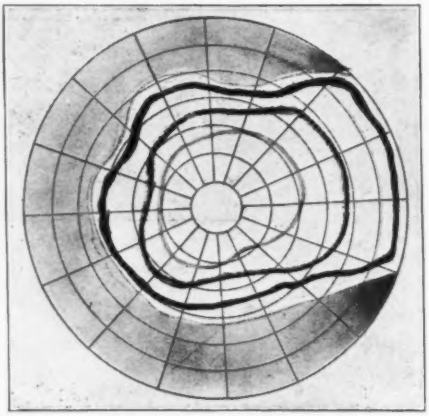

Chart No. 4.

due to the oculists* for their share of the investigation and observation.

From a purely clinical point of view, we can do no better than call attention to the following diagnostic table, taken from "Endocrinology and Metabolism" (Appleton & Co.). [p. 21.]

The ophthalmoscopic investigation established, as was already pointed out, that the lesion was in the region of the optic chiasm and, to be more exact, that this lesion, whatever it was, destroyed the chiasm in the median line. Now, what are the conditions capable of bringing about such a destructive process? We consider the following to be an exhaustive enumeration:

1.—Tumors of the base of the brain, benign or malignant, especially carcinoma of the sella turcica.

2.—Tumors, inflammation or hypertrophy of the hypophyseal gland.

---

*My thanks are due Drs. Harry Gradle and Burton Hazeltine, who saw the patient with me and aided me in arriving at a more critical appreciation of the possible problems involved. —M. Kern.

HYPOPHYSIS CEREBRI (PITUITARY GLAND)

	States of Overfunction	*States of Underfunction*
Endocrin System	Enlarged sella turcica, intact or eroded. Occasionally normal sella. [Thyroid struma or atrophy.] [Enlarged thymus.]	Small, closed-in sella, or large eroded sella from tumor. Hypogenitalism. [Thyroid or adrenal symptoms.]
Metabolism	Accelerated basal metabolism. Diminished carbohydrate tolerance. Retention of phosphates and lime salts.	Retarded basal metabolism. Obesity. Increased carbohydrate tolerance.
Bones, Joints and Muscles	Bony overgrowth; enlarged oval, elongated or hexagonal facial skull; enlarged frontal sinuses; exaggeration of external occipital protuberance (x-ray). [Gigantism before puberty.] Broad, thick, spade-like hands.	Dwarfism, if before puberty, or inversion of sex characteristics. Delayed development.
Respiratory System	Enlargement of larynx with low pitched, hoarse voice. [Chronic bronchitis and emphysema.]	
Cardiovascular System	[Cardiac hypertrophy.]	Hypotension. [Bradycardia.] [Tachycardia.]
Blood and Hemopoietic Organs	[Mononucleosis.] [Eosinophilia.]	
Digestive Apparatus	Spaced incisor teeth (hag teeth). Large tongue.	
Urogenital Apparatus	Hypertrophied external genitalia. Diminished libido and potentia (later). Amenorrhea.	Hypoplastic or infantile genitalia; amenorrhea. Diminished libido and potentia. Polyuria.
Nervous System **General brain symptoms**	Headaches; dullness; apathy. Depression; irritability. [Psychoses] [Epileptiform convulsions.]	Tumor symptoms similar to those of states of overnutrition. Fatiguability. Asthenia. Often slight mental deficiency.
Neighborhood tumor symptoms	Optic atrophy; bitemporal hemianopsia; contraction of visual fields; lesions of other cranial nerves, etc.	Same, if tumor present.
Organs of Special Sense	Eye lesions (see above). Large ears.	Eye lesions.
Integument	Thick, dry, sallow skin with exaggerated wrinkles. Hair, beard and eyebrows heavy and coarse.	Pale, thin, soft skin; [may resemble myxedema or scleroderma]. Hypotrichosis Heterosexual distribution of hair.

Sprunt's Chart, from "Endocrinology and Metabolism."

3.—Gumma or syphilitic endarteritis of the brain.

4.—Meningitis.

5.—Exostoses pressing on the chiasma.

6.—Sclerosis of the external carotids.

While bearing in mind this classification of possible causes, let us recall that the predominant phenomenon was temporal hemianopsia, the characteristics of which throughout the period of observation are graphically shown by the charts.

Now, when we have hemianopsia or, in plain English, absence of half of the visual field, we differentiate, according to the external symptoms, a heteronymous and a homonymous form. In the former, the temporal half of the field is absent. This is the most common form and is found only in the young and middle aged. It is the one observed in our patient.

The better to appreciate the dire results following lesions at or about the chiasm, we must recall the anatomic condition of the visual path. These should be read up in a textbook.

Division of the chiasm in the median line would destroy the conductivity of the decussating fibers. As these supply the inner halves of the retinæ, these would be thrown out of function; thereby suppressing the outer temporal half of each visual field. Of course, inflammation or tumor of the hypophysis may produce such a condition, easily explained by the proximity of the hypophyseal gland to the visual pathways.

Ophthalmoscopy shows that blindness in this class of cases is not due to increased cranial tension, but to pressure on the optic tracts. Papillary edema is, as a rule, absent; primary atrophy, however, is the rule.

Ophthalmoscopy, the Roentgenogram, and the general clinical data should suffice for an exact diagnosis in this class of cases.

Reverting to the causes which may destroy the chiasm, exostoses, meningitis, gumma, endarteritis and sclerosis of the external carotid arteries can be ruled out with certainty. While all factors point to the only remaining affection as the *fons et origo* of the disease.

Hemianopsia of the pituitary type has been described in the literature quite frequently. Cushing tells of an interesting case which, for purpose of comparison with the one under consideration, merits detailed citation.

The patient, a young farmer, sought medical advice for acromegaly. The patient's family history and past history up to his thirteenth year are of no interest. After his thirteenth year, it was noted that he gained in weight rapidly until reaching the enormous increase to 222 pounds. Violent headaches made their appearance and, two years later, gradual loss of vision took place. An x-ray photograph of the skull showed a hypophyseal tumor. Cushing removed a glandular growth successfully, except for hypopituitarism, which necessitated glandular feeding. While the patient kept on gaining in weight, he improved subjectively. Vision returned.

Comparison between Cushing's and our case shows quite a difference in the mode of onset, progress and treatment. We are accustomed to think of endocrine disturbance in connection with acromegaly. We had no such phenomenon in our case. The progress in Cushing's case was relatively slow, in ours comparatively fast, resulting in an early tragedy. Whether or not organotherapy without surgery would have accomplished equally good results in Cushing's case, we are unable to determine, though in the future we shall give this method of treatment a thorough trial before turning the patients over to the surgeon.

In our case, organotherapy, properly managed, has demonstrated in a triumphant manner its tremendous powers for good. It is a far jump between the year 1672, when Lower, in a paper on the origin of catarrh started that "the serum is separated in the ventricle of the brain and is poured again into the blood, and makes weight," and the year 1923, when the pendulum appears to have swung to the other extreme and all solutions of obscure clinical problems are attempted by the new science of endocrinology.

Enthusiasm, fashion and research will, undoubtedly, produce much good and some harm, as there is always great danger of one-sidedness. But, modern medicine has progressed so far that we need not be blinded by the theoretic speculation. Clinical investigations and therapeutic observations can be checked by scientific methods with a degree of accuracy which removes our teachings from the domain of the speculative to biologic reality. It is all a question of individual endeavor properly to utilize the scientific facilities for exact work, in the interest of humanity and the science of medicine.

REFERENCES:

Cushing, H. "The Pituitary Body and its Disorders." Philadelphia. Stieren, Edw.: "Enlargement of the Pituitary Body." *Amer. Journ. Ophth.*, 1921, Vol. iv—209. Keegan, J. J.: "Neighborhood Signs in Pituitary Tumor." *Am. Jour. Ophthal.*, 1921, IV—835. Cassidy & Gifford: "Apparent Pituitary Tumor with Restoration of Vision." *Am. Jour. Ophth.*, 1922, V—206.

The Use of Paraffin in Treatment of Burns and Scalds

By W. W. SHAFER, M. D., Haines City, Florida.

FROM France, during the latter part of the war, came reports of a wonderful new treatment for burns with a preparation devised by a French physician, Dr. Barthe De Sanford, who had been applying it with remarkable success in hundreds of cases in the French Military Hospital provided by the French Government. Several magazine and newspaper articles appeared in this country relative to the treatment and it was taken up by a number of prominent physicians, among them Dr. William O'Neal Sherman, chief surgeon of the Carnegie Steel Company.

The treatment consists in the application, hot, of a wax-like preparation to the denuded surface. The dressing proposed by Dr. De Sanford is not, of course, in itself a panacea and, as has been shown by the *Journal of the American Medical Association,* the idea itself is by no means new. Yet, it is new to a vast majority of physicians who are unfamiliar with the, often, startling result obtained by this peculiar method of treatment which seems to go counter to accepted surgical practice. To seal up an infected burn, was thought then to be contrary to sound surgical principles. Notwithstanding this, patients were being dressed without pain; they were recovering two or three times more rapidly than under former methods, and were free from cicatricial contractions, with a minimum scar tissue. It must not be assumed that third-degree burns heal without scar, but the resulting scar is infinitely less, and the tendency to contraction, with the associated frightful disfigurements and loss of function, is practically eliminated.

The preparation contains approximately ninety percent of paraffin with the addition of two percent of eucalyptol (which is added to cover the disagreeable odor arising from the burns) and other ingredients that increase its plasticity and adhesiveness, as described by Lt. Col. Hull in the *British Medical Journal.*

I have used several makes or preparations, but obtained best results from that produced by The Abbott Laboratories, of Chicago. However, I also found that the cost of their products is higher than that of others.

I do not want to discuss the pathology of burns and scalds, nor will I allude to the classification except to state that Morton divides them into three degrees, or classes. In extensive burns and scalds, the pathology is practically the same. Usually, we have all three degrees present.

Shock is a marked symptom in all severe burns and scalds, and its development depends upon the location of the burn and the extent of the surface involved. Superficial burns of great extent and those involving the trunk are accompanied by more marked shock than circumscribed burns with deep destruction tissues.

The mortality following extensive burns and scalds is very high. According to Durham, if one-half of the surface of the body is burned, even superficially, death usually results. Nusbaum states that recovery is rare if one-third of the surface of the body is superficially burned or scalded. Death usually occurs within twenty-four hours; that is, before a reaction is established. If reaction is established, death may occur later from exhaustion following profuse suppuration or from septicemia.

Burns and scalds are very fatal in infancy and childhood. In this class of patients, death usually results from shock.

I presume that I have had the ordinary percent of burns that fall into the hands of the general practician. But my success, which was as good as the average, was far from satisfactory to me.

So, when, a few years ago, I began to see accounts of a new treatment for burns in my journals, my attention was immediately arrested. I studied carefully everything I could find on the subject and, as the treatment suggested appealed to me, I prepared for a possible accident. I now desire to report two cases that came under my care in which I used the paraffin treatment as best I could from the information I had obtained from my reading.

History of Case

On April 19, 1919, Willie McCullah, age two years, fell backward into a tub of boiling water, sustaining a severe scald of second and third degree, extending from the gluteal fold to the lower edge of the hair on his neck and reaching halfway around the body on both sides, including the left arm to elbow. There were also first-degree burns of face and scalp involving one-third or more of the surface of his body. This accident occurred soon after noon. I saw him about midnight the following night; found him in profound shock, tempera-

ture 104°, and with indications of convulsions.

As soon as I could, I applied the paraffin-wax remedy which is prepared by The Abbott Laboratories and called by them Parresine. I first cleansed the burned surface with Chlorazene solution, which gives me better results as an antiseptic than anything I have ever tried. Then I applied the melted Parresine to the entire burned surface, using for this purpose a common varnish brush, as I was unable to get a camel's hair brush and was not provided with the special atomizer which, I think, is by all means the best method of applying the wax. This latter causes remarkably little pain when applied to burned surfaces.

One might think that the application of this melted wax might be very painful; but, as paraffin melts at a very low degree of heat, the pain of the application is slight. After this application was made, I covered it with a very thin layer of cotton and again applied a coating of Parresine which then formed a cast. This excluded the air and gave the patient immediate relief from pain. The paraffin-wax was put on so as to extend over onto the healthy skin, as it adheres to the healthy skin quite well, much better, in fact, than to the burned surface.

It is wiser to test the temperature of the wax on your own skin before applying it to the patient, as you will thereby avoid having it too hot.

I was surprised at the progress in this case as there was remarkably little pus formed and the burns were virtually healed in four weeks.

During the first days, the dressing was applied twice each day; later, once a day. The scar was not thick and dense as is usually seen and, consequently, there was very little tendency to contraction.

Another Case History

The second case was that of a married lady whose clothes caught fire from an open stove. This occurred on the evening of December 12, 1919. The burned surface was in the back and extended from the knee of the left leg to above the waist, causing a burn of the second and third degrees, involving a surface of twenty-one by thirteen inches on the left leg and hip and a surface of ten by ten inches on the right hip. Above the waist, there was a large surface of first-degree burn. The hands were also burned in tearing the clothes from her body. There was high fever and severe pain for several days, requiring the use of morphine to give her any rest.

The patient's suffering was aggravated by her being compelled to lie on her face all of the time. On January 1, temperature was normal; there was no pain; appetite was good; she was sleeping well. January 5, right hip entirely covered by new skin, left hip and leg three-fourths covered by new skin. No pain, but she complained of itching. February 8, 1920, the burns were almost entirely healed. February 14, entirely healed and patient doing housework. The same treatment was used in this case as in the first case.

There has been some tenderness in the scar and some itching, but this was relieved by an ointment of lanum and vaseline.

The scar in this case is not dense and there are no contractions, although the burn on the left leg was very deep, going down to the muscle just above the knee.

Since writing the foregoing, I have had two rather severe burns, one in a Negress who was accidentally burned by having a skillet of hot grease spilled on her left forearm and hand; the other in a white woman who had a pot of hot coffee spilled into her lap, causing severe burns of both thighs on the anterior surface. The treatment was the same in all cases and with the same happy results. In the case of the Negress, she greatly feared that the resulting scar would have an unsighty whitish appearance. When healing had taken place, it was with difficulty that the scar could be seen. I believe that this plan of treatment prevents the extensive suppuration so frequently seen with the old plan of treatment and, consequently, the deeper layers of the skin are protected. In the case of the colored skin, the unsightly scar is prevented.

Instead of the very thin layers of cotton used to help form the cast in the dressing, in my opinion, the lace-mesh gauze, as prepared by The Abbott Laboratories, would be preferable and more economical.

How to Lead a Continent Life

Sexual Continence: Its Management and Treatment

By WILLIAM J. ROBINSON, M. D., New York City

Chief of the Department of Genito-Urinary Diseases and Dermatology, Bronx Hospital and Dispensary; Author of "Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women"; "Sexual Problems of Today," Etc., Etc.; Editor of "The Critic and Guide"; and of "The American Journal of Sexology."

EDITORIAL COMMENT.—The problem of how to lead a continent life is not always as easy as it may appear to those who are restrained by religious motives or by fear. Fear, be it said, very often is a potent protector. Unfortunately, it does not protect one from his own thoughts and wishes. As Doctor Robinson points out, very truly, he is most fortunate in this respect who has found his work and can sublimate his desires in that. Work that is creative, constructive, of absorbing interest and, possibly, work that is occasionally relieved by attention to an equally fascinating hobby or by devotion to music, arts, nature study—in short, anything that deviates one's attention from concentration on one's physical inclination, is helpful.

THIS article has nothing to do with the morality of sexual continence or the immorality of sexual non-continence. Sex morality forms the basis of a separate essay by the author. Nor has this article anything whatever to do with the injuriousness or harmlessness of continence to man's physical and mental health. This also forms the thesis of a separate essay. The subject of this article is just what the title says it is.

It happens that men are sometimes so situated that they are compelled—the compulsion may be imposed from without, may be forced by circumstances, or may be self-imposed—to live a sexually continent life. How can we make the continence least irksome, least injurious, least difficult to bear? This is the important theme of the present paper.

A man may find himself in a small American town where extramarital relations are impossible or are accompanied with great social risks; he may find himself in a barbarous or semi-barbarous country where the women rather repel than attract or where venereal disease is so rampant that exposure is criminal folly indeed; or a man's religious convictions or moral principles may be such as to make him regard non-marital relations as sinful or criminal; or, last but not least, the man's own physical state may be such (to hint at one thing, he may be in an infectious condition) as to make a perfectly continent life imperative.

Whatever the underlying cause may be, thousands of men are forced to live a completely continent life. And they come to us and ask us to tell them how they can carry through such a program with the least friction, with the least amount of struggle and depression. I shall herewith try to answer this question.

Mental Attitude

A thing may be injurious. But, the knowledge or the fear of its injuriousness may cause more injury than the thing itself. This is a truism. The tremendous power of the mind over the body is also a truism and needs no emphasis here. It is therefore important, first of all, to convince our patient that he can get along very well for six months, a year or two, and, under special circumstances, much longer, without any sex relations, and that he will suffer no real or permanent injury. He may feel discomfort, but there is a difference between suffering injury and feeling uncomfortable. It is important to convince him that sexual continence is not at all so injurious or non-feasible as certain sexologists (reacting against the untruthfulness of certain medical theologians who denied the injuriousness of sexual continence altogether) have tried to make him believe. I have had a number of patients who were so habituated to frequent sex relations that they asserted it was quite impossible, quite out of the question, for them to go for a month or two without any. But, when I told them that they were foolish, that I knew better, and that they could get along very nicely for six months without any indulgence—they did so, and were better off for it.

Repeating the platitude: The mind has an enormous influence on the body, and in no sphere is this influence so great as it is in the sexual sphere.

Diet

Diet plays an undoubted rôle in the human libido, and he who wants to or is obliged to live a sexually continent life will have to pay

strict attention to his diet. He does not need to starve himself, but he will need to limit his proteids, particularly his animal proteids, to a minimum. Meat once a day, a small piece. Eggs, lobsters, oysters, clams, crabs, shrimps, all sorts of fish, caviar, shad roe are best left out altogether. Spices and condiments should not be touched at all. Fruit of all sorts, salads (without pepper or spicy dressing), bread and butter and milk, will have to constitute the bulk of the diet. Those who live on a purely lacto-vegetarian diet will be best off in this respect. That alcoholic beverages of all sorts will have to be given up entirely, goes without saying. This alone is as important as all other things combined. But, coffee and tea are also best left out; though weak tea, if not drunk too hot, is the least objectionable.

Smoking

Only on a small percentage of men does smoking produce an aphrodisiac effect. On most men, smoking has a calming, sedative effect. This, however, is not true of women. On them, smoking generally has an exciting effect. Whether the effect is due directly to the tobacco or to suggestion or to the imagination, the tobacco smoke bringing up the image of a male, is only of academic importance. But, non-married women should leave the weed alone.

Bathing

Hot baths are unquestionably injurious for our purpose. That is, they act as stimulants and increase the libido. They must, therefore, be eschewed entirely, especially at night. But, how about cold baths? They are just as bad if followed by a reaction (and, if not followed by a reaction, that is, if the skin does not become warm and glowing, they are injurious in another respect: the patient may get chilled and catch a bad cold); that is, they will act as a sexual stimulant. The only safe way is, to take lukewarm baths, and even those not too frequently—once or twice a week, for cleanliness' sake. Drying shoud be accomplished with a soft towel and no vigorous friction should be used in the process of drying oneself.

Exercise

Exercise is good, but preferably where the upper part of the body is used. Much exercise with the pelvis and the legs is not advisable. Too much walking, particularly if done briskly, bicycle riding, horseback riding, are contra-indicated. Always we must bear in mind that the libido may be excited by local stimulation as well as from the brain. As I say to my continent patients: Work all you want with your head, your throat and your arms, but leave your pelvis and your legs alone.

Sleeping

Common sense will tell you that a man who desires to lead a sexually continent life should not sleep in a luxuriously soft bed, on feather bolsters and cover himself with eiderdown blankets. The bed should be narrow, the mattress smooth but hard and the blanket warm but light. The feet, however, should be well covered; they should never be permitted to become cold. And, there should be no lolling in bed. Go to bed when you are sleepy and get up when you are awake.

Sane Sex Ideas

A man who wishes to live a continent life should be familiarized with the ideas of modern sexology regarding a number of sexual problems. He should have sane ideas about masturbation and nocturnal pollutions. He should not feel depressed and humiliated over an occasional autoerotic act, nor should he get frightened over an occasional night emission. On the other hand, he should know enough to consult a physician if the emissions become too frequent (nightly or every other night); but, even then, he should not become panicky. He should know that the thing can be corrected.

Proper Behavior

It should not be necessary to mention and to reiterate certain points: they are so self-evident. And, nevertheless, it is hard to refrain from making an article "complete." Thus it seems utterly superfluous to state, but nevertheless I state it, that a man who wishes to live a continent life and who will read "Aphrodite," "Painted Veils," or the "Memoirs of Fanny Hill" is simply a fool. The same is true of a man who will attend the Music Box Revue or Ziegfeld's Follies, shows which are more "lewd, lascivious and obscene" in their effect than any book that has ever been written. Nor will our friend who wishes to live a continent life visit any cabarets. As to dancing, that is entirely out of the question. To a sexually continent man, any kind of dancing, be it of the primmest and most old fashioned sort, is injurious. In brief, the man who earnestly wishes to live a sexually continent life will avoid obscene literature, erotic shows, nude pictures, cabarets and other questionable places and companions.

All the foregoing is superfluous, and yet, for completeness' sake, we have to mention it. The obese woman, who was given a diet and who gained fifteen pounds in one month, said that she did not know that that was the only diet she was to live on. She thought she was to have that diet in addition to her regular four

meals. So, you can never be too explicit with some people.

Occupation

Blessed, always blessed, is the man who has found his work, but particularly blessed is the continent man who has found his work. For, half of his battle, more than half, is won. The sexually continent man, who is interested in and who loves his work, has an easy road to travel. He can sublime all or most of his libido into his work, and his struggle, in comparison with the man who loathes his work or has no work at all, will be an easy one. On the other hand, the man who regards his work as drudgery, or who is altogether idle, will have great difficulty in living a continent life. For the idler, it is a practical impossibility. I may add that "the man who has found his work" will find it particularly easy to sublime his libido if his work is of a *creative* character, if it is work to which his name is attached and for which credit is given him as the creator. The sex instinct is a *creative* instinct and it is most readily sublimed into other *creative* work. Socially useful, genuinely philanthropic work is also a splendid substitute for the sex urge. Sincere revolutionists, inventors, discoverers, founders of religions, have no difficulty in leading a continent life.

Medicinal Treatment

It has become a custom with a certain class of half-baked doctors and laymen to sneer at medicinal treatment. This is a proper reaction against the doctors who relied exclusively upon drugs. But they who sneer at drugs and deny their therapeutic value altogether are as much quacks as they whose system of medicine consists exclusively in drugging. Drugs are an extremely valuable adjunct to other methods of treatment, provided they are used judiciously and with proper discrimination. As will be seen, medicinal treatment constitutes, in this paper, as it usually constitutes in all my practice, only one-tenth of the measures used in handling the case. But, this one-tenth is an important part of the treatment, as important as any other part. The medicinal treatment is very simple, extremely simple: it consists in nothing more than in taking a good saline cathartic in the morning. The best saline is the common and cheap magnesium sulphate (Epsom salt), plain or effervescent, or magnesium sulphate and sodium phosphate in effervescent form. The dose should be sufficient to cause one or two good soft or watery movements, and no more. One to two heaping teaspoonfuls in a glass of hot water on arising, is the proper dose and time for taking the cathartic.

No cathartic should be taken on going to bed. It may disturb the sleep and it may, sometimes, cause sexual excitement. The cathartic is important for several reasons: (1) It prevents the accumulation of feces in the rectum, which press upon the prostate and may cause libidinous excitement; (2) it avoids straining at stool, which is, in itself (in adults as well as in children), often the cause of erections and of unnecessary sexual irritation; and (3) it *depletes the system of its libidogenous hormones.* I do not say that this latter is a desirable thing to do under ordinary circumstances; but, for our purposes, it is desirable.

Of course, common sense and decent judgment will tell whether the cathartic is to be used daily, every other day or only twice a week. No system of treatment can be made fool proof, and you will always have to mix your medicine with brains. However, I should like to see anybody with an active daily saline in the morning finding great difficulty in overcoming his libido. Small doses of atropine (1/120 grain), occasionally, will prove useful, particularly where there is posterior urethral congestion.

In this connection, the bromides and that worse abomination, that renal irritant, potassium nitrate (nitre, saltpeter) are only to be mentioned to be condemned. While as an emergency remedy, for a brief period, they may be made use of, they are not to be thought of as a remedy for long stretches of time. To epigrammatize: bromides may be occasionally useful in acute continence; they would be worse than useless in chronic continence.

To Summarize:

Whether absolute continence is desirable or not, whether it is attainable or not, whether it is harmless or not, does not form a part of this paper. The thesis of this paper is: If a man is forced or has made up his mind to live an absolutely continent life, what *modus vivendi* should he establish for himself? The claim is made in this paper that, with a proper mental attitude, proper diet, sane sex ideas, proper behaviour, avoiding all erotic stimuli, with proper occupation and an efficient saline laxative, most men will find the task of leading a continent life and of subliming their libido into higher or other channels a comparatively easy one.

Continence in Women

I have spoken in this article only of man, as if woman did not exist or as if she had no continence problem to solve. As a matter of fact, many more women than men are forced to live

a continent life—live it not only temporarily but permanently, to the end of their days. But, it is universally accepted that women have to do it, and that is all there is to it. If continence hurts them, if it injures their health or their mind, or if it kills them—why, it is sad, but there is no remedy for it. As I heard an old and socalled eminent doctor say: If my daughter were dying from lack of sexual gratification, I would rather have her die before my very eyes than allow her to defile herself with illicit intercourse. And, so think the majority of men—and perhaps women too. The time for discussing female continence has not arrived yet—not in this country, at any rate. Nor does this article deal with the rightness or wrongness, the healthfulness or harmfulness of continence. It deals with its management, its treatment. And this is just as applicable to woman as it is to man. A woman who has difficulty in leading a continent life will find her task considerably facilitated by applying the principles elucidated in this paper.

Modern Treatment of Diabetes Mellitus

By W. BUSCH, M. D., D. Nat. Sc. and: EDWARD AHLSWEDE, M. D.,
Hamburg, Germany.

From the Institute of Physical Therapy, London-Hamburg.

DIABETES mellitus is universally acknowledged as belonging to that group of diseases which are based on an inefficiency of large cell-complexes and is due either to hereditary predisposition or to an acquired external damaging factor. The presence of grape-sugar in the urine is therefore only a symptom of the constitutional involvement and is not the only factor which requires therapeutical attention.

Which particular cell-group is damaged in an individual case, will be difficult to decide. In most cases, the Langerhans islands in the pancreas are affected. These intertubular cell-accumulations of the pancreas abound in capillaries, as every histologist knows, and this abundance of blood explains the increased activity of the epithelium in these regions while, at the same time, it points to the one and only way in which the "mellitus" of the pancreas can be influenced. However, a disease of the pancreas is not the only cause of the appearance of grape-sugar in the urine. Grape-sugar is occasionally concomitant with grave nervous disorders, adrenal tumors, meningitis, carbon-oxide poisoning. However, it is always present in diseases which affect large cell groups. The treatment of these disorders was, therefore, hitherto mainly directed towards a diminution of the increased sugar elimination by dietary measures: unfortunately the success was very doubtful.

Therapeutic Requirements

It is true that an appropriate diet can considerably inhibit or, rather, protract the acid poisoning of the system and can also retard the formation or insufficient combustion of the sugar. However, diet alone cannot altogether do away with it. This explains why modern treatment has taken a different course altogether. It is certain that the larger part of grape-sugar is *not derived* from the carbohydrates of the food (flour, sugar, etc.,) but from the albumin. This points to a strong decrease of the activity of the protoplasm of numerous cells of various organs, which again accounts for the disturbance of the nutrition. Probably, an alteration of the ferment in the serum takes place. It follows that neither an attempt to combat the symptom (the sugar) nor the effort to influence *one* organ alone can promise much therapeutical success. It is rather a general stimulation of all cells that should be aimed at.

The abundance of blood-vessels in the Langerhans islands already shows the way in which this can be attained. A passive or active hyperemia must be attempted with a view to stimulating the activity of the cell-protoplasm. Passive hyperemia, however, is limited in its application; here, diathermy treatment of the pancreas and the liver is most suitable. Yet, a more energetic effect is always attained by active hyperemia which is based on a strong stimulation of the organs. Now, the best therapeutical agents for this purpose are those utilized in modern protein-substance treatment, particularly milk-albumin injections as well as the percutaneous protein application. These effect both an active hyperemia and a strong stimulation of the cell-protoplasm. The parenteral (intramuscular, intravenous, intradermal) administration of protein-substance stimulates all tissue cells more or less equally strongly. The difference in the intensity of the stimulation of an organ varies with its supply of blood. It also appears that a damaged organ responds more readily to these

strong chemical irritations. This reminds one of the fact that a diseased heart-muscle responds to digitalis while the sound muscle does not. For explanation, we must assume a loosening in the structure of the colloids of the superficial plasma layers in the "damaged" cells, into which the proteins can penetrate more easily.

From the foregoing, the modern treatment of diabetes mellitus is based on three points:

1. To effect a hyperemia of those organs which are probably most damaged (e.g., pancreas).

2. Stimulation of the protoplasm-activity of the body cells particularly in the damaged organs, *by parenteral administration of protein-substances* (injections of milk-albumin solutions or percutaneous protein-ointment application).

3. Diet, to inhibit as far as possible the formation of sugar and of acids.

As the modern dietary enforced in diabetes mellitus has undergone considerable change, we may be justified in mentioning it in the following.

Our experiences more or less cover those of H. Schmidt[1]. Overfeeding must be strictly avoided and animal albumin limited to the utmost. However, carbohydrates of any kind may be freely administered. The following table may demonstrate a practical *combination* of dietary measures with protein-body treatment:

1. Light cases of diabetes mellitus (up to 2% sugar approximately).

Diet. 150 Gm. meat (=33 Gm. albumin) 50 Gm. cheese (=11 Gm. albumin) 150 Gm. bread (=13 Gm. albumin) 200 Gm. fruit, 1,000 Gm. vegetables.

Treatment: Once a week, one intramuscular injection of (at the beginning) 1 Cc. of milk-albumin solution and, possibly, diathermy treatment of pancreas. 10 Cc. should be the maximum dose for one injection of a sterile and toxin-free milk-albumin solution. 8 injections in all will generally prove sufficient. Should a patient object to injections, the percutaneous protein administration may be selected. For this purpose, it is advisable to "sensitize" the skin first. We expose the latter in the pancreas region for 15 to 20 minutes to a blue electric globe at 10 to 15 centimeter distance and thereby hyperemize a surface of approximately 15 square centimeters. A 5-% or 10-% protein ointment is then thoroughly rubbed into the hyperemic skin surface. The percutaneous method is best applied twice weekly for a period of two months. Alternate the places of administration to avoid irritation. The skin of arm, back, chest or leg can be chosen.

2. Serious forms of diabetes mellitus.

Diet. Instead of meat albumin, eggs are chosen. 3 eggs, 50 Gm. cheese, 150 Gm. bread, 200 Gm. fruit, 1,000 Gm. vegetables.

Special forms of diet: (a) Vegetables: confinement to room. 3 eggs, 60 Gm. bread, 1,500 Gm. vegetables. (b) Rice diet: 3 eggs, 250 Gm. rice. In serious cases, more than 5 to 6% sugar with symptoms of acid poisoning, two vegetable and two rice days followed by another two vegetable days are prescribed every fortnight. *This is then supported by protein-substance treatment in the same way as shown in the table above.* The injections should be carefully dosed and 5 Cc. not surpassed. On vegetable and rice days, neither protein injections nor inunctions are advisable. The following table, after Schmidt, for comparison may interest in this place:

I. Light Diet:

1. Breakfast: coffee and saccharine, 50 Gm. bread, 20 Gm. butter, 25 Gm. cheese.

2. Second Breakfast:* 1 cup beef tea, 50 Gm. bread, 10 Gm. butter.

3. Lunch. 1 plate soup, 50 Gm. meat, 500 Gm. vegetables, 1 apple.

4. Afternoon:* coffee and saccharine, 50 Gm. bread, 20 Gm. butter, 25 Gm. cheese.

5. Evening: 50 Gm. meat, 500 Gm. vegetables.

II. Strict Diet. Instead of meat at lunch, 2 eggs are given and 1 in the evening.

1. Breakfast: 150 Gm. vegetables, 30 Gm. bread, 10 Gm. butter.

2. Second Breakfast:* 200 Gm. vegetables, 1 egg, 1 glass of wine.

3. Lunch: 500 Gm. vegetables, 1 egg. 1 cup of coffee.

4. Afternoon:* 150 Gm. vegetables, 30 Gm. bread, 20 Gm. butter.

5. Evening: 500 Gm. vegetables, 1 egg, 1 glass of wine.

III. Rice Diet.

1. 50 Gm. rice in beef tea.

2. 50 Gm. rice with egg.

3. 50 Gm. rice in beef tea, 1 egg, 1 cup of coffee.

4. 50 Gm. rice pudding.

5. 50 Gm. rice in beef tea, 1 glass of wine.

References

1. H. Schmidt. *Medizin. Klinik.* Nr. 18. 1921.
2. R. Schmidt. *Medizin. Klinik.* Nr. 27. 1920.
3. Riedl. Can the parenteral administration of casein effect a pronounced protein action by its physical and chemical qualities? *Deutsch. Medizin. Wochensch.* p. 881. 1920.
4. Riedl (Advantages of casein). *Deutsch. Medizin. Wochensch.* p. 881. 1920.
5. van Lier. Uebersicht über Milchtherapie, *Tijdschr. voor Genees Kunde.* 28, II. 1920.

Amnesia and Analgesia in Labor

By F. GROSS, M. D., Kansas City, Kansas

EDITORIAL COMMENT.—This article, which is concluded in this issue, contains an unusually fair, lucid and logical investigation of the merits of the various methods that have veen proposed to alleviate the pains of labor, to lessen shock and exhaustion of the mother while avoiding an excessive rate of stillbirths and of infant mortality. Doctor Gross' report shows a remarkably patient and careful study and a thoroughly fair balancing of facts and of arguments pro and contra. He has done a great service to the general practitioner and to obstetricians in preparing this useful and instructive article.

[*Concluded from December issue, p. 888.*]

Effect On the Infant

This is one of the most important inquiries among the many interesting ones that arise. Many obstetricians have refrained from using scopolamine-morphine solely on account of the supposed risks to the infants. With a haphazard or incompetent administration of the drugs, the plea has doubtless some grounds. But, when it has so often been demonstrated that, where reasonable care is exercised, the risks are no greater than in ordinary obstetrical practice, the medical profession can afford to revise its earlier opinion. The greatest diversity of opinion has hitherto been expressed with regard to the symptoms termed *"oligopnea"* and, what is really a further grade, *asphyxia* or *apnea.*

It is universally admitted that scopolamine-morphine, when administered to the mother, circulates in small quantities in the placenta and, therefore, in the infant. If the effects on the mother are, to induce hypalgesia and to reduce shock and exhaustion, the drug can not fail to produce some measure of the same effects on the infant. It has been the habit of physicians not to devote much attention to the sufferings of the infants during their passage through the parturient canal which is quite often too small for their comfort, and I am convinced that, in ordinary practice, some of the *deaths in stillborn infants are due to the pain and exhaustion consequent upon a prolonged and difficult labor.* Indeed, statistics show that infants may have their chances of life influenced for the better by the protection which scopolamine-morphine affords (always presuming that there has been no overdose), and the fact, that there were 3 percent less fetal deaths than in non-scopolamine cases, is explained on the ground that the slightly delayed breathing worked favorable, by *preventing inspiration before the head was fully born,* thus preventing aspiration of fluids.

In discussing the danger of **asphyxia** in infants, I would like to observe that the critics of this method appear to lose sight of the fact that asphyxia quite commonly occurs in parturition, apart from any treatment of drugs. In fact, I believe that it is never caused by these drugs when they are properly used. Every textbook of obstetrics contains a more or less elaborate account of the etiology, treatment, etc., of the condition, and every obstetrician and practitioner must be only too familiar with it. In the heat of argument, writers have not always distinguished between *asphyxia, or apnea, and oligopnea.* The terms have been used interchangeably, whereas the conditions themselves are distinct.

Oligopnea is a condition of the infant which is apparent immediately on expulsion. An inspiration occurs at once, the infant gives one cry, active movement begins, but the cry and the movements suddenly become abortive. The cardiac action is vigorous and in no way abnormal; but, during the period of suspended respiration, the heart slows a little, to regain its normal rate quickly on the next inspiration. The cessation of respiration may last one-half to one minute, then another inspiration occurs, often accompanied by a sigh. The respiration gradually becomes normal, and the infant usually passes at once into a peaceful sleep. Even with continual advance towards normal respiration, this state may last up to one hour—the general appearance of the infant giving one the impression it is *lazy* and *tired.* The color of the infant in these cases differs but little from that of those born after no administration of drugs. It is very rare that artificial respiration has to be resorted to. Morphine is undoubtedly the main factor in the causation of oligopnea; but, at the same time, it is scarcely possible to dispense with the morphine, because, in the first place, it gives that anodyne effect which scopolamine almost lacks, and so allows an early period of hypalgesia during which the amnesic effect can be easily attained; and secondly, it has the effect of diminishing the tendency to restlessness which otherwise would probably be more common and more pronounced.

A few observers have tried the effect of scopolamine alone, not giving even the initial dose

of morphine, but the desired seminarcotic effect does not appear to be attainable without the combination. In view, therefore, of this fact and of what also seems quite clear now—that the morphine is mainly responsible for the oligopnea—the conclusion appears to be established: *Give morphine only in the initial dose, and reduce the quantity of it to the lowest limit, never exceeding gr. ¼, by which the desired amnesia and hypalgesia can be obtained.*

Other Methods Producing Amnesia and Analgesia

Many observers met with failure, mostly on account of overdosage and paying no attention to the memory test. It is true, the more experience a physician has with scopolamine treatment, the more he will be able to dispense with the memory test, to a certain degree; but, whoever has not an extensive practice and experience, will not be benefited much by a time schedule or a scheme alone. In fact, if he solely adheres to the scheme, the twilight sleep may be disastrous. Since 1919, the Freiburg school is trying a "morphine-poor" twilight sleep, according to the following schedule, which is known as the **"Freiburg Simplified Twilight Sleep"**:

At 8:15 Scopolamine 0.00045 (gr. 1/130) with Narphin 0.03 (gr. ½)
At 9:00 Scopolamine 0.00045 (gr. (1/130) without Narphin
At 10:00 Scopolamine 0.00021 (gr. 1/300) without Narphin
At 11:00 Scopolamine 0.00021 (gr. 1/300) without Narphin
At 12:00 Scopolamine 0.00021 (gr. 1/300) without Narphin
At 1:00 Scopolamine 0.00021 (gr. 1/300) without Narphin
and Scopolamine 0.00021 (gr. 1/300) without Narphin every hour thereafter.

Gauss emphasizes that morphine is not absolutely essential for the introduction and maintenance of twilight sleep, but a small initial dose of 0.01 (narphin 0.03 is equivalent to morphine 0.01, or gr. 1/6) is desirable to hasten the beginning of the twilight sleep and at the same time it is harmless for mother and child. The dose of morphine should not be repeated except: (1) to re-assume the twilight sleep after it has been interrupted for some reason or another; (2) if the pains should be greatly increased towards the end of the second stage (but ether is here more advisable and safer); (3) by abnormal sensitiveness to pains in very nervous women; (4) by great painfullness on account of extraordinary contusions of the soft parts.

We know through the investigations of Holzbach that scopolamine passes to the fetus through the placental circulation and will leave the fetal body inside of twenty minutes through its kidneys; on the other side, Straub has proven that morphine is not excreted by the kidneys, and repeated doses lead to an *accumulation in the fetal body* and can cause a sudden disappearance of the fetal heart sounds on account of heartblock. Large or often repeated small doses of morphine are responsible for apnea, weak uterine contraction and increased operative frequency.

This brings us to the consideration of **Siegel's New Modified Twilight Sleep,** or the "Amnesin-Daemmerschlaf", as it has been used by him and others for a number of years. While his present method has met with great opposition, especially from the Freiburg school, in the past two years, nevertheless, it must be admitted that, after a fair comparison, this method and the before-mentioned Freiburg simplified twilight sleep bring about the same results and success. If Siegel's method were as dangerous as pictured by Gauss during the hateful controversies in the medical press of 1920, such an eminent man as Prof. Jaschke of the university of Giessen would not dare to allow a method to be used at his clinic and, using it himself, if it would not give satisfaction. It must be stated again, in order to meet the best of success, one must master the basic principles of twilight sleep and adhere strictly to all requirements, and individualize where individualization is the best for mother and child, as Gauss and Siegel are doing even with their simplified methods. I refer again to what has been said under narphoquin for the better understanding of the Siegel method, which is as follows:

At 8:15 1-½ ccm scopolamine (0.00045 or gr. 1/130) with 1-½ ccm narphoquin (repres. morphine 0.006 or gr. 1/10)
At 9:00 1-½ ccm scopolamine (0.00045 or gr. 1/130) with ½ ccm narphoquin (repres. morphine 0.002 or gr. 1/32)
At 10:00 ½ ccm scopolamine (0.0015 or gr. 1/400) with ½ ccm narphoquin (repres. morphine 0.002 or gr. 1/32)
At 11:00 ½ ccm scopolamine (0.00015 or gr. 1/400) without narphoquin
At 12:00 ½ ccm scopolamine (0.00015 or gr. 1/400) without narphoquin
At 1:00 ½ ccm scopolamine (0.00015 or gr. 1/400) with ½ ccm narphoquin (repres. morphine 0.002 or gr. 1/32, and thereafter scopolamine every hour, and every third dose combined with ½ ccm narphoquin.

A comparison between the two simplified methods shows that Gauss uses a larger amount of scopolamine and only 1/6 grain of morphine, while Siegel uses a smaller amount of scopolamine and 1/5 grain of morphine *during the first six injections.* As most of the children are

born between the sixth and seventh injections, the results obtained are about the same under either method, with this exception that Gauss reports amnesia in 85 percent, while Siegel has 97 percent. Undoubtedly, the larger portion of the latter is due to the slightly larger amount of morphine used.

The Use of Pantopon

Many observers, and especially in the United States, have lately used pantopon, a Swiss product. In my most ideal cases, I used for the initial dose one full ampule of pantopon (gr. 1/3) with scopolamine gr. 1/140, followed by scopolamine alone in doses based upon the amnesic condition of the patient. Considering pantopon as *the most powerful hypalgesic and analgesic*, I would like to warn not to repeat the dose in the interest of the child.

Pantopon has a big field of usefulness, especially in cases where the onset of labor is more than ordinarily severe and where also the duration is likely to be long. In many cases of rigid os, I have given a single dose of pantopon and scopolamine; and, after an absence of several hours, I found the patient still in partial seminarcosis and with a complete dilatation —showing that the effect of pantopon is certainly more prolonged than that of morphine. Hypalgesia and even analgesia is attained more effectively and rapidly, and the patients are quieter under its influence. Besides this, pantopon has a stimulating effect upon the heart which morphine does not have. At the same time, one must not lose sight of the fact that, the more opium is used, the more we are likely to meet with oligopnea and apnea.

Analgesia and Anesthesia

According to the medical dictionaries, Analgesia means "insensibility to pain" and Anesthesia "a state of insensibility". We have seen that complete amnesia, but not complete analgesia, can be obtained without risk to the infant by the use of scopolamine in combination with the derivatives of opium. If our aim is *complete* analgesia, we must consider the use of a general anesthetic, such as chloroform, ether, ethyl chloride or nitrous oxide-gas.

Indications for General Anesthesia:

1.—Great pain at the end of the first stage or in the second stage.

2.—Great excitability at these periods.

3.—"Tumultuous pains" at any period of labor, especially if the cervix is not dilated or if the head is on the perineum; the idea being, to moderate the power of the uterus and to save it, the cervix or the perineum, from rupture.

4.—To preserve the perineum when the "bearing-down efforts" are too strong.

5.—To eliminate the "inhibition of bearing down" due to the pain.

Conditions:

1.—Labor must be sufficiently advanced.

2.—The pains must be strong and regular, so as to offset the weakening effect of the drug (if any).

3.—In cases of severe hemorrhage, avoid anesthetics, if at all possible, and give ¼ grain of morphine hypodermically instead.

Objections to Anesthetics (esp. Chloroform):

1.—Without doubt, the parturient enjoys a slight immunity from the risks from surgical anesthesia, and obstetric anesthesia is but little dangerous; goiter and status lymphaticus, diseases of the liver, and toxemia, especially of the hepatic type, hemophilia and sepsis contraindicate most anesthetics. Chloroform is especially harmful in such cases, not seldom leading to acute yellow atrophy of the liver, a condition which closely resembles, if it is not identical with, secondary chloroform death.

2.—Anesthetics weaken the uterine contractions (except ether!), pains are sometimes weakened or further apart, hemorrhage in the third stage is more profuse, and contraction and retraction of the uterine muscle is often delayed and insufficient. Ether acts in this manner to a much less degree. On the other hand, when contractions are tumultuous or irregular and too acutely painful, or when the woman will not bear down in the second stage, because of pain in the vulva, an anesthetic will often calm and soothe, thereby actually hastening delivery.

3.—The anesthetic may affect the child and, if administered for a long time, may cause an acute albuminoid degeneration of its vital organs during the first days; but, given as here recommended, the danger to the child is very slight.

4.—Objections on the score of religious scruples, that the pain in labor is "physiologic" and that the mother will not love her child born without pain, need no comment.

Chloroform:—Until recently, the anesthetic which almost universally held the field in obstetric practice was chloroform, as is well known. Fortunately, owing mainly to the concomitant cardiac hypertrophy, parturient women tolerate it well even in the presence of grave diseases. It has the disadvantage that, in an overwhelming majority of cases, the time during which it can be used in a long labor is very limited. The relaxation, which it causes in involuntary muscle fibers, certainly increases the risk of post-partum hemorrhage and is a

further objection. At the present moment, therefore, the choice of an anesthetic in obstetrics lies between chloroform (or ether) and scopolamine-morphine. It may not be strictly accurate to speak of the latter as an anesthetic, but it is convenient to do so when discussing the relative claims of the two. These may be set out in tabular form:

Chloroform:	Scopolamine-morphine:
1. The total time it may usefully be employed is limited.	1. It may be used during the whole process of labor.
2. If it is given in effective doses, it produces atony of voluntary and involuntary muscular fibers.	2. Used in obstetric doses it does not produce atony in either voluntary or involuntary muscle.
3. Especially in the later stages (the very time when it is most generally used) this atony predisposes to post-partum hemorrhage.	3. Atony being absent, there is no increased tendency to post-partum hemorrhage.
4. Pain ceases, but uterine contractions cease also.	4. Pain ceases or is greatly diminished, but the uterine contractions do not cease, as scopolamine is a proven ecbolic.
5. In large dosage causes the same pathological changes that we find after eclampsia, i.e., necrosis of the liver, etc.	5. Does not cause such pathological changes and is an excellent adjuvant in the conservative treatment of eclampsia.

There is perhaps only one indication for the use of chloroform in labor and this is in a case of version, as it causes a more rapid and a more complete relaxation than any other general anesthetic.

Ether.—As before mentioned and as admitted by the greatest number of physicians and surgeons, *ether is the safest of all inhalation-anesthetics.* If properly administered, it is absolutely safe in obstetrical practice where it is used only to dull or relieve the pains, without, or with only a very brief loss of consciousness.

Advantages and disadvantages between chloroform and ether:

Chloroform:	Ether:
1. Is quicker in action, easier to carry, pleasanter to take and seldom causes nausea and vomiting; most surgeons condemn it unqualifiedly.	1. Is slower in action, more is required, it is bulkier and the patients often vomit afterwards. It has proved itself safer in obstetrics, as it has in surgery.
2. In the presence of an open flame, it decomposes into carbonyl chloride and hydrochloric acid, both of which irritate the air passages of all in the room, making the attendants cough and even fatally poisoning them.	2. It is used where it is necessary to operate in the presence of sepsis, nephritis, eclampsia, cardiac disease, goiter, or uterine atony; it may not be used close to an open flame because of the possible danger of explosion.

Method of Administration:—Ether is very rarely given in the first stage, best in the second. The open method is preferred, because, in obstetrics, the carbonization of the blood, so common in general anesthesia, must be avoided in the interest of the child. When these "conditions" are met and the pain begins, 15 or 20 drops of ether are poured on the mask, and the patient takes deep breaths of the vapor; as the pain increases, a few drops more are given; as the pain subsides, the mask is removed. This procedure is repeated until the head is just about to escape from the vulva, when the ether is poured on frequently, and the first stage of surgical anesthesia is reached, consciousness is abolished for a few minutes, during which time the infant is delivered.

All writers admit that ether does not retard the progress of labor "to any extent," but I must go a step further and say: *"ether does not only not weaken the uterine contractions and the abdominal pressure, but ether is a more powerful ecbolic than quinine and a close rival of pituitrin* and, in some cases, the effect of ether on the uterine contractions is so tumultuous and the abdominal pressure so strong that I have been forced to counteract these efforts with 30 to 60 drops of chloroform at the time the head was born, to prevent lacerations of the perineum." I expect to go more fully into the details about this ecbolic action of ether in another paper, when I will report the use of a new ether-inhaler for obstetric and surgical anesthesia.

Nitrous Oxide and Oxygen are generally employed all over the United States, but the general conclusions and criticisms of close observers are: "It is recommended in 'suitable' cases; however, if the first stage is prolonged, scopolamine-morphine is preferred. It is safer than chloroform in all forms of heart, liver and kidney disease except where complete relaxation is desired, when ether is preferable; the prolonged deep anesthesia with nitrous oxide is not safer than ether. For version, forceps, extensive perineorrhaphy, vaginal cesarean section, ether is the agent of choice." De Lee says: "Obstetric analgesia with nitrous oxide requires most minute attention to detail, as well as skill; there is danger of asphyxia to the baby if the mother becomes cyanosed; occasionally, it is necessary to change to ether for actual delivery." Inasmuch as the administration of nitrous oxide and oxygen requires the assistance of an expert anesthetist and on account of the high expense of the gas, this method is not the choice for a general practitioner to produce analgesia in labor.

Ethyl chloride has no field in obstetrics except at the time the head is born, the period of greatest anguish, when it is of great value. Due care, however, must be exercised and under no condition should the total dosage ex-

ceed 10 Grams, even in surgical anesthesia.

Spinal and Sacral Anesthesia have been used to produce analgesia in labor, but the methods are too dangerous to deserve any recommendation. In order to make this paper as complete as possible, we must say a few words about

Hypnotism and Suggestion, which has been extensively practiced in the past three years in Europe and especially at Heidelberg, Marburg and Dresden, by an entirely new method developed by Schultze-Rhonhof at the Heidelberg Clinic. While this method is absolutely harmless for mother and child, and complete amnesia and analgesia can be obtained, yet, not every physician has the necessary qualifications to successfully induce hypnosis, nor is every woman susceptible to hypnotism—it takes individualization. The greatest objection to this method, however, is the necessary time required, in that it takes from 4 to 12 preliminary treatments before labor and the physician's presence is essential from the time the patient has regular pains every 15 minutes until labor is completed, and even for several hours thereafter. With a trained staff of a dozen or more interns and assistants at a hospital, such a method may, of course, be called "the ideal method" by such men as Prof. Menge, Kehrer and even Dr. Lindig of the Freiburg Clinic. It never will be the choice for the busy American physician until Schultze-Rhonhof succeeds in simplifying his present technic, for which, however, we must give him most deserved credit.

Results

After discussing all the different methods by which amnesia and analgesia in labor can be obtained, it is well to give a brief account of the results to be obtained *by strictly following the technic* and exercising the care as outlined before. The following figures are based on the results of more than 75,000 cases reported in the medical literature, at various times, in the past 20 years and treated with scopolamine-morphine (or the derivatives of opium), with and without the additional use of a general anesthetic at the end of the second stage. *Complete amnesia* is obtained in 75 percent (at Freiburg 85 percent), *partial amnesia* in 15 percent and *failures* in 10 percent. There will always be some cases where amnesia can not be obtained, either on account of the short time, in which a few small doses could not work satisfactorily (as amnesia can not be expected if we start the injections in the second stage), or on account of an individual hyposensibility of the mother. There will also always be some cases of extreme restlessness or extreme inertia, and in such cases it is best to give up the scopolamine treatment and be content with an alleviation of pain to a less degree. Any sensible woman will appreciate this, if informed accordingly.

The *average duration of labor* is 16 hours and 11 minutes, which is well within the limit set by other observers for non-scopolamine cases. The *first stage is shortened* by the action of scopolamine, but the *second stage is somewhat lengthened.*

Operative frequency (without forceps) is 10.4 percent (normal 7.8 percent) and *forceps frequency* is 9.6 percent, which is about the normal.

We find *vomiting* in 8.5 percent, *dizziness* and *headache* in 2 percent, and *restlessness* in 7.5 percent.

Oligopnea is present in 13.5 percent, which is hardly more than in non-scopolamine cases, and it can be greatly reduced by limiting the dose of morphine as well as that of pituitrin; oligopneic children show a certain laziness for nursing during the first week.

Asphyxia livida, or apnea, is seen in 5.4 percent and may be due to an overdose of morphine and is best overcome by hot baths.

Infants died intra partum (stillborn) in 1.8 percent and *in the first nine days* in 1.2 percent, or a *total* of 3 percent, while the infant mortality in non-scopolamine cases for the same period is from 5 to 7 percent. This low rate of stillbirths is due to the intra-uterine narcotic action of the drug on the fetal respiratory center, whereby the danger of premature respiration and aspiration of liquids into the bronchial tubes is lessened. At Freiburg, today, the rate of stillbirths is 0.89 percent with scopolamine treatment and 1.7 percent without it! *Now what is the cause of this greatly reduced rate of stillborn at this clinic?* Nothing else than the *perfect conduct of labor* with no overdosage of drugs and *controlling the fetal heart sounds* every 10 minutes in the first stage and every 5 minutes in the second stage! If we do likewise, our success in reducing the stillbirths will be the same.

Post-partum hemorrhage is reported in 5 percent; I myself have not seen more than one post-partum hemorrhage in the past five years, and this was *after* the expulsion of the *first* placenta in twins and *before* the birth of the second baby. But the hemorrhage in this case must be ascribed to the inability of the placental site to contract satisfactorily on account of the unborn second twin and not to scopolamine-morphine. I make it a routine to give *pituitrin* in all cases *as soon as the head is born,* if none has been given before, and *ergot after delivery*

of the placenta, to avoid a possible post-partum hemorrhage. For five years, I have carried Rissman's aortic clamp in my obstetric bag for safety, but I never had any occasion to use it except in the case before stated. *Manual extraction* of the placenta is not increased; there are *no maternal deaths* under treatment and none as a result of it. *Milk secretion* is not interfered with, the *afterpains* are frequently absent, the *puerperium* proceeds uninfluenced and the drugs in no way affect the kidneys.

It may be remarked here that scopolamine-morphine treatment is particularly valuable in those cases where there is, say, a slightly flattened pelvis; the child is larger than normal; more than an average time is needed for moulding of the head; and there is thus every prospect of a long labor. There seems to be no reason whatever why a case should not be allowed to go on for 48 hours or more *provided* the fetal heart sounds remain normal.

If cesarean section were not, from any cause, discovered to be indicated until labor has begun, or if the decision for its necessity came in the course of labor, the risks would be less under the scopolamine-morphine treatment than in a case being conducted without. Everyone is familiar with the disastrous results of a compulsory emergency cesarean section. One of the grave dangers is the consequence upon futile attempts at delivery, and, as the shock is reduced at least to a very small minimum by scopolamine-morphine, this particular risk is diminished.

Conclusions

We find today a tremendous difference of opinion as regards the relief of pain during labor compared with that of ten years ago. Even those who most strongly opposed the use of drugs producing amnesia and analgesia have taken their stand with those who are exerting every effort to make the labor as comfortable as possible for the patient. After trying various methods, it has been found that *the scopolamine-morphine method is the most satisfactory.* The twilight sleep has long ceased to be an experiment—it is an established thing! We should make every effort to attain the successes of Freiburg along the lines advised by the masters at that place. In other words, we should try to obtain *amnesic* deliveries with or without analgesia. The basic principles and technic mentioned in this paper form the *conditio sine qua non* by which we must be guided. Give the first dose (scopolamine, gr. 1/130, with morphine, narphine, narphoquin, laudanon or pantopon) to a primipara when the *os externum* will admit two fingers; begin as early as possible in a multipara or when the pains are strong and regular every 7 to 8 minutes. Give the second and subsequent doses of hyoscine, gr. 1/400 to 1/300, every hour *but not losing sight of the fact that we should be guided by the amnesic condition of the patient, never pushing* the drug until the patient shows no more signs of pain—the object is not amnesia at any price but temporarily alleviation of pain. Don't repeat the morphine late in the labor—*never* in the second stage. If anything beyond the hyoscine is needed, give *ether during the pains.* Keep the friends away, darken the room and insist on quiet being maintained. Give the patient plenty of water and catheterize in long cases; remove the child as soon as it is born.

It is admitted by nearly all observers that the scopolamine treatment is not only *harmless for mother and child,* if we follow strictly the rules and technic, but is of the *greatest benefit to both.* If the mother knows that she is not going to face an ordeal, but simply going into a peaceful sleep during which her child will be born, there must be a *cheerful prenatal influence* which can only be advantageous. The absence of the fear of labor promises to *increase the birth-rate* and we all recognize that, in a certain proportion of cases, fear of childbirth has been the determining factor in the prevention of conception or the production of abortion. The treatment *induces amnesia, hypalgesia or analgesia,* it *prevents shock and exhaustion* of the mother; it *reduces the rate of stillbirths* as well as *infant mortality* during the first ten days. As every parturient has a right to demand alleviation of pain that strips motherhood of its horrors, it is the indispensable duty of a physician to relieve the woman of suffering and get her through the labor in the easiest manner; and, likewise, to safeguard the interest of her child.

Late Syphilis of the Rectum

By CHARLES J. DRUECK, M. D., Chicago, Ill.
Professor of Rectal Diseases, Post-Graduate Medical School, Chicago.

TERTIARY syphilitic changes, such as ulcers, gummata and fibrous hyperplasias, in the rectum, arise sometimes very late in the disease, often after all of the earlier evidences have disappeared. They cause most distressing changes which are likely to be mistaken for tuberculosis or cancer. An indurating edema associated with these changes will further complicate matters.

MacCallum[1] says, "It will be observed, in considering the development of the tertiary syphilitic lesions, that they often arise in places where there were secondary lesions which had healed, and it has been suggested that they are the effect of the further growth of spirochetes which had been left behind in the healing of the secondary syphilis. The evidence is not entirely convincing in regard to this, although there are many well attested cases in which gummata appeared on the site of secondary lesions."

Gummata occur quite frequently in the rectum and may be single or multiple, although Johnson[2] says that the isolated gumma is very rare. It may develop in the mucosa of the anus or rectum, in the connective tissue of the bowel or of the ischiorectal fossa. It is painless, usually about the size of an enlarged lymph gland, but may attain an enormous size. On digital examination, the mass feels like a uterine myoma; or, if several gummata exist and they are small, they feel like peas or marbles beneath the mucous membrane. An area of fibrous hyperplasia extends about the gumma and radiates out into the normal tissue. Thus, the growth closely resembles early cancer by being nodular and freely movable in the submucous connective tissue. Later, a caseating necrosis develops in the center of the gumma, and the tumor becomes soft and elastic. As the tumor enlarges, it projects into the lumen of the bowel and is exposed to trauma and ulceration. The gumma does not abscess or extend in chains and is thus differentiated from an infected lymph gland.

Case C.23 presented a large single gumma. This woman, a seamstress, aged 40, had not been able to work for a year because of pain in the rectum. She had daily bowel movements which were streaked with blood or mucus, but the evacuations were not particularly painful. She had not lost weight. On digital examination, there was found, about two inches above the anus, a large, hard, round, lobulated tumor about two inches in diameter. It was between the rectum and the coccyx and was firmly fixed. It was not painful and could easily be mapped out. No fluctuating spots were found. A roentgenogram clearly showed the growth. A positive Wassermann test of the spinal fluid was obtained. A clinical diagnosis of gumma was made and, under treatment, it promptly showed improvement.

If left untreated, softening and liquifaction of the gumma occurs later, with rupture either into the rectum or externally on the skin. If the opening be into the rectum, fecal matter may be forced into the pocket and an ischiorectal abscess be formed later. Many fistulæ may thus appear extending out onto the skin or invading the bladder or vagina. If a gumma is incised, the wound remains unhealed and later becomes surrounded with extensive, dense scar tissue. Finger and Landsteiner[3] have shown that gummata contain living spirochetes which can produce infection in another animal.

The proctitis associated with the ulceration and cellular infiltration occasions a mucopurulent discharge, a feeling of fullness in the rectum, and sphincteric tenesmus. When ulceration is marked, a deep burning pain is complained of. Each defecation is painful and is usually followed by bleeding.

Fibrous infiltration of the rectal coats sometimes occurs, without distinct gumma formation but, instead, a diffusing through all the structures of the bowel, particularly the mucosa and the submucosa. Multiple syphilitic nodules arise in the mucous membrane, usually just within the rectum proper, and spread upwards, sometimes as far as the sigmoid flexure or colon. This is a hyperplastic proctitis, a diffuse and wide infiltration of the whole wall of the gut, but especially the submucosa, with mononuclear and epithelioid cells. It soon breaks down into extensive ulcers which may even surround the rectal lumen. A foul discharge is present and defecation is painful. Numerous fistulæ develop, some of which extend widely out on the buttock into the vagina or urethra. Pain and tenesmus are constant, because ulceration is extending in one place while cicatrization goes on in another. Alternate constipation and diarrhea occur and the rectum is dilated and hypertrophied above the ulcerated area. Later, the dense scar formation

about the healing constricts the lumen of the gut and obstruction arises. Although this condition is very exhausting, the patient usually dies of some other cause for which this chronic poisoning prepares the way.

Case A.—A woman, age 42 years, married, two children, no history of syphilis. About three years ago, she noticed a hardness of the perineal body. The vagina seemed hard and stiff; her physician gave her local treatment, but without success. When I saw her, she suffered from obstinate constipation which was gradually getting worse, and a tentative diagnosis of carcinoma had been made. On examination, the anus was found in its normal position. The skin of the perineum and about the anus was rough and wrinkled, dry and thickened, but not sensitive. On attempting a digital examination, I found the rectal wall hard, rough and tight about the finger, making introduction very painful. The narrow, cylindrical three-quarter inch rectoscope was introduced with difficulty. The hardness and fullness of the tissue was greatest at the anus and shaded away for a distance of five inches within the rectum. The examination was painful and, although it stretched the tissues considerably, it did not cause any bleeding. A positive Wassermann was obtained here.

Syphilitic Stricture of the Rectum

Just how frequently syphilis causes stricture of the rectum, is a mooted question. Some authors claim that all non-malignant strictures are syphilitic, while others are equally positive that strictures result from any ulcerative changes regardless of its type or etiology. At any rate, we do find that syphilitic stricture may follow any syphilitic ulcer, as chancre, secondary ulcer, or broken-down gumma, and that it has certain peculiar characteristics. The Wassermann reaction will, however, help us to decide definitely for or against lues in a given stricture. Clinically, however, it is sometimes impossible to say that a given stricture is or is not syphilitic. Of course, once ulceration occurs and septic infection is added, the picture is so confused that a microscopic examination of a piece of the tissue may be necessary for diagnosis. The chancroid, though not syphilitic, is a close cousin and frequently produces a very serious form of stricture.

The discharge of blood, mucus or pus, of which many syphilitics complain during the secondary stage, is often attributed to the mercuric remedies administered, and the probability of the presence of mucous patches or ulcers is forgotten. We do not see stricture patients during the latent or infiltrating stage, because they do not consult a physician until they are suffering from stenosis of the rectum.

Histologically, we find in the syphilitic stricture a chronic inflammatory formation about the blood vessels and within their walls. Especially is this found in the arteries. This obliterating endarteritis is the same as that found in any syphilitic lesion.

The infiltration and thickening of the mucous membrane about the ulceration or about the minute gummatous deposits in the mucous membrane impart a stiff, rough, leathery character to the rectal wall and thereby limit and lessen the distensibility of the rectum. A sanious or mucopurulent discharge fills the rectum. Later, when the ulcer may have healed, the mucous membrane remains dry. The cicatrix is blue-white, dense and hard and usually presents some ulceration at its upper extremity. Syphilitic ulcers are inclined to follow the course of the lymph and blood vessels, and, as that direction in the rectum is lengthwise, the contracted portion is usually tubular instead of sharply annular as we find in the inflammatory stricture. This condition may extend from the anus to the colon, although most syphilitic strictures occur from 1 to 3 inches from the anus. The more recent part of the stricture with its infiltration and proliferation is frequently the most obstructive. Ulceration may also be found below the stricture and, from these ulcers, fistulæ lead to perirectal abscesses or open externally on the skin or into the vagina or urethra.

When decided stricture occurs low in the rectum, constipation alternates with diarrhea and the passage of ribbon-shaped or broken stools.

Differential Diagnosis

The differentiation of syphilitic from tuberculous, dysenteric or malignant strictures is a most important factor. Syphilitic strictures usually are long, funnel-shaped contractions with blue-white cicatrices about the ulcers. The edges of the ulcer are never undermined but rather crater-like. In some instances, these dense, white scars can be plainly seen through the speculum in the tissues of the rectum just below the stricture.

Figure 1 shows the tightly contracted rectal lumen of a syphilitic stricture. This woman, Case C.8, contracted syphilis seven years ago, For the past year, she had had pain in the rectum and a purulent, sanious discharge. The bowels are always constipated. On digital examination, the finger, at a distance of one and one-half inches from the anus, comes to a solid impassable stricture. The rectum below the stricture is hard and nodular. The patient has

several fistulæ leading into the vagina and others out onto the skin. These are tender as the digital examination is made. The patient has been on intensive antisyphilitic treatment for some time, and, although her general condition has much improved, the obstipation is still a serious matter and an abdominal anus has been advised.

Pencil-like Rectum of a Syphilitic Stricture.

Not all syphilitic strictures are long and pencil-like in character. Sometimes, the pathology is limited to a small area and the stricture is more annular in character. Here, the differential diagnosis from the physical findings was not possible.

The patient was first seen when acute obstruction had developed and a laparotomy was performed. When the abdomen was opened and the sigmoid was lifted up, it was noted that the hyperplasia seemed largely on one side of the bowel. Resection was performed and subsequent microscopical examination showed that it was not malignant.

—

As has been already mentioned, some of the obstructive symptoms result from the inflammatory swelling about the ulcers. This infiltration and swelling of the mucosa is not syphilitic but rather a reaction to the local streptococcus infection. As the luetic endarteritis subsides, gummatous deposits resolve, or the ulcers heal under treatment, the swelling of the mucosa lessens and, sometimes, the obstruction is relieved. Case C.5 presents such a condition: About one year ago, this woman began to have constant pain in the rectum, of a cutting character and with rectal tenesmus. Since then, she passes blood and pus every day. During this time, she lost fifteen pounds in weight. She is 26 years old. A positive Wassermann test was obtained. She was placed on antisyphilitic medication and immediately began to improve. Her appetite returned. She had formed fecal masses which were evacuated without suffering, and she improved in general physical appearance, although the radiograph of her rectal stricture was still unchanged. In this case, the upper end of the stricture is very different from that of Fig. 1. The upper limit of the strictured portion of the rectum ends abruptly and the normal elastic rectum continues. But the distinctly tubular stricture will be noted. Nothing surgical was attempted, the woman improved steadily until she became quite comfortable and finally left our observation.

Congenital Syphilis

Many of the manifestations of congenital syphilis appear about the anus of young infants and may be overlooked or mistaken for simple skin irritations due to lack of cleanliness. The earliest manifestation of syphilis in babies is, an erythema or dermatitis about the anus accompanied with shallow fissures. The anal mucous membrane is also fragile and brittle and the fissures are easily produced by dilating the anus. If untreated, the ulceration spreads. The skin surface becomes copper colored and, later, is thickened and raised and emits a thin, seropurulent and very fetid discharge. The little fissures may extend into the anal canal and may be secondarily infected. As these ulcers or fissures heal, they leave radiating scars (so-called rhagades). All of this change may occur within the first few months of life. It may begin within the first week or may not evidence itself until the baby is two months old, and may be mistaken for the chafing that results from contact with feces and urine; but the latter condition is never associated with the numerous small, shallow anal fissures found in syphilis.

Treatment of Tertiary Syphilis

The treatment of tertiary syphilis of the anus and rectum requires special management of the local conditions. Every effort must be made to prevent septic infection. The patient should be put to bed and the bowels moved regularly and also irrigated. Ulcers should be cauterized. If the ulceration is extensive and the discharge profuse, the sphincters should be dilated to assist drainage.

The systemic treatment consists in the administration of full doses of potassium iodide,

preferably given in milk or essence of pepsin, the dose built up to 60 to 100 grains daily, in small, frequently repeated doses. Mercury should be administered by inunction or by hypodermic injection, because, when given by mouth, it sets up a teasing diarrhea. Hypodermically, I think, I have had the best results with salicylate of mercury. Every patient should also be given a course of intravenous treatment of arsphenamine.

Locally, ulcers should be carefully and persistently treated. Daily dilating does much to reduce the local capillary congestion, but it must be carefully performed for fear of lacerating the mucosa or even tearing through the bowel wall. These strictures must not be cut, as they invariably fill up with granulations which contract further. Their pathology is not wholly syphilitic but has added septic infection. Posterior proctotomy, excision of the diseased field, or the construction of an abdominal anus may be necessary.

References

1.—MacCallum—Text-Book of Pathology.
2.—Johnson, A. B.—Surgical Diagnosis.
3—Finger & Landsteiner—*Archives Derm. u. Syph.*, 1906; (XXVII, 335).

Memoirs of the World War

By GUSTAVUS M. BLECH, M. D., Chicago, Illinois.

[*Continued from December issue, p. 905.*]

CHAPTER VIII

Evacuation of the Sick and Wounded

THE cars containing our personnel and baggage were coupled next to the locomotive as part of a regular French passenger train. After a delay of about half an hour, we started for our destination, and arrived at Nevers a few minutes before midnight. At the station were Colonel Ruffner and his able assistant Captain I. C. Clark, an officer who had proved very helpful to me during my service in Autun, and we had a pleasant chat.

Near the station, there was music and dancing, the New Year being thus ushered in. The train was not to continue on its long journey until 5:00 a.m. Officers, nurses and men went to the Red Cross canteen for hot coffee and midnight luncheon.

Our journey was marred by our witnessing a fatal accident. In front of our train, which had halted at a station, an American soldier tried to cross a track. Whether he knew that an express was approaching or not, I cannot tell; but I saw a figure in khaki make a somersault in front of the engine. As soon as the train had rushed by, I left the compartment. They had my unfortunate countryman on the platform; he was already covered with a blanket. I could only confirm his death.

Before we started, I had issued stringent orders that any man leaving the train without permission would be court-martialed. I also forbade the men to lean out of the windows. There was much to attract them, and my orders were not liked. But, after this accident, all became very docile; the reason for my order now being appreciated by them by reason of this horrible accident. At every halt, I looked through the window to see that my orders were being obeyed. An hour or so after the fatal accident, I stood near the window. The train lurched forward with a jerk. I was thrown against the edge of the frame and my forehead showed a beautiful swelling and discoloration for the next few days.

At 7:00 p. m., our train entered the railroad station at Tours. Again, there was to be a delay until 6:00 a.m. I directed a few soldiers to remain on guard, the rest of the detachment being taken to barracks for a night's rest. Officers and nurses were advised to seek hotels. At the station, I had to show my telegraphic travel order and this enabled the officers to pass into town.

As for the nurses, they could not enter town until each produced a travel permit in addition to their identification papers. The man who called for it was in civilian clothes, a non-commissioned officer of the Intelligence Corps.

"Why, this is the worst nonsense I ever heard. These ladies are part of my command. We are under orders to proceed to Bordeaux. We are en route in obedience to this order. We are not allowed to remain on the train and they cannot enter town. I may add that, even if I had known about travel permits, I would not have been able to secure them."

"Sorry, Sir," the sergeant replied; "but these are orders. Nurses cannot travel otherwise."

"Under whose orders do you work?"

He named the official.

"Please call him on the phone and convey my compliments to him and my opinion that he is an unmitigated ass!" There was some frantic telephoning. The chief nurse undertook the

job of going through a town in almost complete darkness, to lay down a sacrifice on the altar of the god labeled: "Official Red Tape."

The sergeant realized my position and my cause for vexation. He was polite and asked me to step aside. "I want to apologize for my persistence, Sir, but I had no alternative. However, there is a reason for all this. We cannot be too careful. You have no idea what troubles we have with nurses traveling all over France without authority."

I did not believe him, though I pretended to do so to end the discussion. I had dinner in town. The nurses were lodged in a Y. W. C. A. hotel, but, no matter what hotel I tried, I was invariably given the stereotyped information that the hotel was full. I tried a small one. The owner had a small room at the price of thirty francs. I did not care to be robbed to that extent for five hours' sleep and went back to the station. I found the train, crawled into my compartment, stretched out on the bench and went to sleep.

Bordeaux

At 5:30, all officers and nurses were in their seats. We arrived at Bordeaux at 9:00 p.m. The hospital which, we learned, was located in a suburb, was telephoned and we were told that ambulances and trucks would be sent for us. When we reached the hospital, it was about 10:00 p.m. All I saw, as we entered a park, was a small three-story building, and I was not impressed. However, I guessed that I saw only the front part. Our reception by the officers was formal. I asked that nurses, officers and men be furnished supper. The nurses were taken in tow by a representative of their corps. We officers received something to eat. I was astonished to hear that the distance to the officers' quarters was too great to be made on foot and that ambulances would take us to the other side of the park. It was too dark to estimate the extent of the grounds; but, the next morning, I endeavored to find the office building and lost my way.

My first impression was that the institution was almost uncanny in size and I have since heard many a visitor express himself likewise. It actually required a few days' time before I was oriented and knew the extent of the camp. As institutions of such size are not seen in civil life and as I have reason to believe that the hospital at Bordeaux was the largest single-unit hospital of the American Army, a brief description may not be amiss.

A Huge Army Hospital

The hospital occupied two parks. One belonged to the Ministry of Public Instruction, the other to a widow. The principal building was a three-story "E"-shaped college for boys; 625 feet long. It contained the administration offices, store rooms for clothing, dispensaries, laboratories, morgue, shower-baths, all on the lower floor. The two stories were utilized as wards for officers, nurses and women workers, and for enlisted patients. One section was assigned for prisoners of war, sick military prisoners, and the insane. An enormous barrack facing the center of the building contained the central kitchen with a capacity for feeding more than two thousand individuals. It contained the most elaborate refrigerating plant that I had ever seen, even in large hotels; store rooms for food, a small butcher shop and kitchen and dining hall for the nurses.

At some distance farther south in the park, was a permanently built chapel (Catholic) and, clustering around it, eight barracks, each one 105 feet long and 20 feet wide, which were divided in separate rooms for the nurses. These were equipped with lavatories and shower baths. One of these barracks served as a nurses' clubhouse.

These as well as all barracks on the ground, except the Y. M. C. A. buildings and barracks for enlisted personnel, were of brick with wooden floors. All inside walls were plastered smooth. There were seventy-seven barracks in irregular groups. To this must be added three warehouses, three kitchens, two mess halls, one power house, a garage, an animal house and several shops. A private, three-story residence afforded quarters for the staff. According to the official map, the park occupied more than sixty-seven acres of land.

By utilizing all available ground for large tents—we used sixteen socalled ward-tents for convalescent and venereal cases—I could have arranged for a maximum of nine thousand patients without crowding.

Settling Down to Work

The telegram directing my organization to proceed to Bordeaux contained the phrase: "to relieve the original personnel of Base Hospital No. 6." The commanding officer of the hospital at first interpreted this to mean that we came to help out and that our identity as a unit was not to be maintained. There was also doubt in my mind, and I allowed him to assign my personnel according to their respective specialties. But, within a few days, the situation cleared up. Instructions came to transfer all patients and records to Base Hospital 208, on completion of which the institution was to be controlled by us. All personnel not part of the original unit were to be absorbed by us.

To augment our personnel, a hospital unit consisting of twelve officers, thirty odd nurses and approximately forty-five enlisted men was ordered to the hospital for duty. Two rooms were assigned me in the administration building. In one, I established my temporary office and quarters; in the other I placed my clerks and such documents as we had taken along from Autun—practically a wagon-load of records.

The chief surgeon of Base Section No. 2 (headquarters, Bordeaux) was General Robert E. Noble. I had once met that officer in Camp Logan, while he was on a tour of inspection. For a long time, he had been associated with General Gorgas in the Panama Canal Zone. I called on him twice to pay my respects, but he was out. His assistant, Colonel Coburn, a young regular-army officer, received me cordially, though my own status was then in doubt.

I was at work at my little desk when the door opened and a general with the insignia of the medical corps entered with outstretched hand. I recognized General Noble and came to salute. Let me state right here that, from that moment, General Noble was kindness personified. At that time, I did not foresee that I would have many troubles and perplexing problems to solve. I called on him often—too often, I thought—for aid and advice and, in every instance, I received what I asked, to say nothing of cordial support when I had to maintain discipline under trying conditions. Had it not been for General Noble, I should doubtless have broken down under the excessive strain, and it was only when he assured me that my measures met with his approval or when he suggested other measures, that I went back to my task refreshed and encouraged. I shall later tell of my relations to the Chief Surgeon's office; General Noble was my immediate superior, located in the same city and, to my last day of life, I shall feel nothing but deep gratitude for this able officer who was far-seeing and just.

It was estimated that it would require two weeks to check the records and property to be taken over by us. That program was carried out without a hitch, and, under telegraphic authority, at midnight of January 15, I took command of the hospital. I utilized this period of transition to become familiar with the grouping of the patients, with the huge equipment and with the morale of the personnel.

Base Hospital No. 6, commanded by Col. Warren L. Babcock, a physician of Detroit, had one great advantage in that the senior members of the staff were prominent Boston specialists, the original personnel having been recruited from the staff of the Massachusetts General Hospital. These men showed my senior officers all patients, their methods of scientific records and the examination of the permanently-disabled for discharge.

There were some minor changes which, I decided, would increase efficiency. As one who had enjoyed the benefits of six years of military service, I decided that discipline among the patients and personnel should be improved. This should not be interpreted as in any way reflecting on the value of the great services rendered the army by that unit. It was a question of difference of opinion from purely military viewpoints, as I was firmly convinced that a military hospital had also certain military functions.

Finally, it could not escape me that some officers, nurses, and enlisted men were so filled with the desire to go home that they did not perform their duties with enthusiasm. When I took command, my seventy-odd men became a negligible quantity, for the detachment was increased to over five hundred—more than many a regular-army regiment even as late as 1916. There were seventy medical officers attached and nearly two hundred nurses—truly a substantial family. It was apparent to me that something must be done to arouse enthusiasm.

I do not enjoy what some people call a 'magnetic personality.' Educated in the school of hard knocks, deprived since my fourteenth year of paternal control and protection, and thrown on my own resources; I have known the bitterest phases of life. Since early manhood a military enthusiast, I realized one thing even before I became identified with the military service; namely, that official duty means a responsibility which is exceedingly exacting. In civil life, one is one's own master. If one shirks his duty, he experiences a personal loss. In military life, one has a trust. To betray that trust, is worse than felony. Such is my creed.

Enforcing Discipline

The first officers' meeting, immediately after luncheon on January 15, was attended by all officers on the post, including the outgoing officers. I expounded my creed. I did not forget to pay tribute to the distinguished gentlemen whose burdens we had assumed, but I also announced my policy of undivided devotion to duty, of a rigid military discipline. My demand that all patients physically able should be held to salute passing officers was based on the opinion that they represented a future military asset which must be preserved.

The address was received with great enthusiasm. Officers, whom I had not seen before and who were soon to leave, came to me and told me that, had that kind of a talk been given them when they first entered the service, they would have been better officers. One of my older officers called on me during the afternoon and told me that I had won over all new officers to my way of thinking, and that they pledged themselves to serve under such a commanding officer.

"That's all wrong," I replied, "and I wish, when you have a chance, that you would impress on them that I meant it when I said that they are serving not *under* me but *with* me, and that we all are serving the Nation. Let them do their duty—I will do mine."

Some time later, reports came to me that a number of enlisted men had committed serious infractions of discipline. Some ward orderlies did not report for duty on time; others left the wards without permission; and some overstayed their pass limits. I was determined to bring down the summary-court trials to the minimum. One officer had been busy every morning trying from five to ten offenders, patients as well as personnel. These men had received fines or sentences of brief confinement.

I found on my desk such sentences submitted for approval. A summary-court record does not contain the testimony, but shows only two entries: Plea—guilty (or not guilty) and the finding. If the trial officer finds the accused guilty, the sentence follows. As commanding officer of the post, I could approve or disapprove, mitigate or suspend sentence; but, in the absence of recommendations, I could not but accept the opinion of the court.

In Autun, we had had virtually no summary court. Company discipline had proved sufficient. I called the detachment commander for a conference. Then I learned the true state of affairs. Among the five hundred men were many rough characters with whom little could be done. I thought for a moment.

"Have every man in the Y. M. C. A. tomorrow, at 6:30 in the morning!"

This was the time when the night orderlies were about to get off duty and be relieved by the day shift. It was a bitter cold morning. I recollect that I nearly froze on the way from the administration building to the hall. When I entered, the first sergeant commanded attention. I held them in that position until I was through.

I spoke to the men as a father does to children. I explained to them that good and obedient men would be rewarded, but that army authority is strong enough to send any man to the rock pile for three months for neglect of duty or disobedience of orders, and that, while it was not my desire to be harsh, especially with men who might not realize what the Articles of War meant, there would be no excuse. I had warned them. Repeated offenders would be sent up to higher military tribunals. I would serve only with clean, patriotic men; all others would be sent where they belonged without further compromise. They could choose.

This, too, had the desired effect. We had two criminals in the command. One had committed a serious offense on a civilian. He disappeared and I never heard whether he was apprehended or not. Another stole money and valuables from a patient who was sent to the prison ward while drunk. He was turned over to the base authorities for trial by General Court Martial. With these two exceptions, there was no serious trouble after my talk.

The Nurse Corps

Since my return to the United States, I have heard all sorts of remarks about the lack of discipline in the nurse corps. I, too, had trouble with a few of them, but these isolated cases cannot possibly reflect on the more than twenty thousand women who came to France to serve their country. When I left the front for hospital duty, the nurse corps was headed by Miss Julia C. Stimson, who enjoyed a splendid reputation as a leader in her profession. She was a woman with a broad horizon. Her first assistant, Miss Blanche S. Rulon who, in civil life, was head of a large institution, came to my hospital on official business and we went over the entire situation. I found her a broad-minded, capable woman who needed but a few minutes' talk with a nurse to estimate her true character.

My first chief nurse came with a unit which desired to remain intact. There was no question that that unit was composed of efficient personnel; but, in spite of the fact that I had given the leading officers of that unit the most responsible positions (for, I felt that their situation was not ideal), a number of complaints came to me that there was much dissatisfactoin among the officers and nurses. The unit believed that it had been sent to Bordeaux to run the hospital and, finding the relation otherwise, discontent resulted. It was a daily experience to hear an officer or nurse say: "Oh, we don't belong to Base Hospital 208, we belong to Unit * * *." The result was friction, jealousy and barrack politics. When I became convinced that, in spite of the fact that I had

done all I could for them, harmony in the big family could not be attained, I went to Tours and laid the situation before the Chief Surgeon's hospitalization officers. These gentlemen realized my predicament and the entire unit was ordered home almost immediately. After this, a regular-army nurse, Miss Mary C. Beecroft, was sent to the hospital as chief nurse. This young woman realized at once that the unification of nurses gathered from other hospitals represented a difficult task.

A certain hospital was dissolved. Of the more than one hundred nurses, a certain portion were distributed among newly-formed hospitals. Their loyalty to the original organization remained unshaken and, when they learned that their old unit had been ordered home, they used every influence to be relieved. One could not please women in such a frame of mind. Miss Beecroft, despite her ability as an executive, could not but suggest that these women be ordered home and others sent in their place.

Before the armistice, the women worked day and night, often close to the front under trying conditions. Now, the general desire to get home developed as an epidemic of nostalgia. Others desired leaves and especially to Paris; but, under regulations, such leaves could be doled out only in homeopathic doses. The majority of the nurses were refined women. Their relation to the officers and men was proper. That such contact in a strange country often resulted in love affairs, is natural. Cupid found a fine place to work in, and he worked. The many marriages between nurses and military personnel prove this.

Just now, the question of rank for nurses has been brought up, on the ground that rank is necessary to insure obedience. It strikes me that nurses are not in a position to issue commands. Professional orders are given as a matter of delegated authority. But, in my opinion, the chief nurses should have assimilated commissioned rank, according to the positions they occupy.

In my judgment, the supervising nurse of the army should have the pay and allowances of a major, her assistants those of captain. A chief nurse of a general or large base hospital should have the rank of first lieutenant, while her assistant and chief nurses of camp hospitals should receive the rank and emoluments of second lieutenants.*

The pay of all other nurses should be increased. Much dissatisfaction was caused by the fact that women, who were assigned as reconstruction aides, received more pay and higher travel allowances after but three months' preparatory training, than the army nurses with a three-year course of training behind them. With the exception of a comparatively few poorly-trained women from small private hospitals, the nurses have demonstrated their worth and deserve recognition.

*Since the above was written Congress has granted assimilated rank to *all* nurses. This, in my opinion, will not work out well.

Difficulties of Administration

The control of an immense institution, such as we had at Bordeaux, was a difficult task for one man. Under regulations, the commanding officer is responsible for everything that is going on in the hospital, the proper admission of patients, their care, the quality and variety of messes, the economic use of funds for purchases, cleanliness and discipline in the wards and outside of the buildings, and the exactness of the reports. For all these and countless other things, the heads of the hospitals are the persons held responsible. Skillful and faithful department heads, assistants and subordinates are essential for success.

In a perfect organization with trained and trusted assistants, the commanding officer has, if he is a man of initiative, a comparatively easy task. In the regular army, the daily reports on personnel, properly grouped, the reports on equipment and even the scientific reports are signed by commanding officers as a mere formality. They know that their subordinates can be depended upon, for to them it is a question of career, of their daily bread.

In Autun, too, I had comparatively easy sailing. By working sixteen hours daily, I managed to see every patient myself, and not a report went out of the office without being verified by me. I even did professional work, especially when some unusual operation had to be performed. Not a report came back for correction.

I had not been in Bordeaux very long, when I opened an envelope from General Headquarters marked "confidential." In the letter, I was called to account for a report that an officer had been reported dead, whereas a later report showed him to be returned to his organization to duty. Meanwhile, a cable had been sent to the States which caused unnecessary suffering to his family. It is hard to describe what I felt. I am not the man to shirk responsibility. My only hope was, that headquarters and not the hospital had committed an error. I rang for the clerk who handled the death reports. He brought in his file. On the date given he had no record of such a death. I sent for the statistical clerk. His carbon copy for the daily report of admissions, discharges and deaths

showed that, over the officer's name, appeared the word—"Died" instead of "Discharged."

The personnel adjutant had signed the sheet without checking the list. He had evidently been anxious to quit the office to attend some social function. There was no use, I said to myself. After all I had preached, women, wine and song proved stronger than my admonitions. What does such a young man care? The more quickly he gets out of the drudgery of army life, the better he will be pleased.

For a while I thought of resigning. Even General Noble could not help me in such a predicament. Whose fault was it? Mine, of course. I wrote a letter to headquarters, read it, tore it up. I tried again. No, cold formality will not do. My third effort satisfied me.

What headquarters thought of my explanation, of the disciplinary measures I had taken, of the methods adopted to prevent recurrence, I do not know. For, even in Chaumont they were human beings and they must have realized that even a commander with the best intentions cannot control every act of his subordinates who either have no ability or no love for the service.

That night, I did not close my eyes. I smoked in bed and tried to sleep, but the letter weighed on my breast like a ton. I paced up and down in my cold room. I made up my mind to reorganize my whole clerical force and to check every report myself, if I had to quit eating and sleeping.

Evacuating Patients

Reorganize! That is an easy word. Among my hundreds of men, very few could handle a typewriter and the work was terrible in quantity. We had instructions, to cite an example, to send in less than twenty hours a thousand patients to a steamship for evacuation to the United States. There were countless formalities to be complied with. First, the proper patients had to be selected. Those who were longest in the hospital came first. The patients could not be selected at random; for, the instructions read to send so many bed-ridden (stretcher), so many ambulatory cases still requiring dressings, so many suffering from tuberculosis, and so on. These men had to be furnished with new clothing, underwear, socks, toilet articles. They had to receive full pay if they had their records, or part pay if they had none, and these payments must be entered on provisional service records. Passenger lists properly classified had to be made out in at least twelve copies. Multiplying machines could not be used, it had to be done by the typewriter. A misspelled name, a wrong serial number meant trouble. My evacuation officer, Lieut. Clarence H. Peterson, a mere boy, but recently commissioned from the ranks in the sanitary corps, worked like a beaver. I trusted him implicitly because his devotion to duty was boundless. I had told him once that there had been criticism by the navy, that a slip-up would mean disgrace to me, and his eyes shone in enthusiasm as he assured me that I could rest easy. Neither women nor pleasures attracted him while he was on duty. With men like young Peterson, I would have had the best organized hospital machine in the world, and I could have felt the joy of existence. But, there were few like him.

Each patient had to be tagged showing name, rank, and the disease for which evacuated. Often, the diagnoses were spelled in horrible fashion. The clerks were not advanced medical students and did not have time to look up the Latin terms. Still, each patient had to take a copy of his sick-and-wounded card with him. Here the diagnosis must be exact. Stage and character of the disease had to be given. For example, it would not do to show inflammation of a joint only, or its technical equivalent, arthritis. We must show whether the inflammation was acute, subacute, or chronic, whether it was an inflammation with pus or serous fluid, and what joint or joints were involved.

The thousand cards in duplicate were finally finished in the evening. It became evident that the ward surgeons had never read the instructions in the Manual. I took off my coat and went to work. Here I found a faulty diagnosis, there an error. One officer reported a soldier one and one-half years old and twenty-seven years in the service, when the data should have been reversed. For Americans, the space marked 'nativity' should show the state or territory; instead, some put in "U. S." Other more important errors had to be corrected.

To check in detail a thousand cards containing half a dozen data, to sign my initials two thousand times, meant to work from five or six in the afternoon until seven the next morning, with breakfast served at the desk.

Training Officers in Paper Work

After such an experience, there was only one thing to do—officers' meetings were transformed into officers' schools. Hours were spent in practice with all possible imaginary diseases being recorded as prescribed.

The field cards of the patients were to contain very brief descriptions of the principal phenomena of the disease, and the measures of

treatment, the object being to send them with the patients in the event of transfer to another hospital, so that the surgeons would know something of what had taken place before.

Interns in civil hospitals are trained to write up "clinical histories." We had special sheets for that work. These were to remain in the hospital. On one of my early inspections, I not only looked in the wards for cleanliness and discipline but through the records. I became convinced that few had the knack of properly filling out the field cards. One physician, to illustrate, not only gave a lengthy description of the physical findings in a patient suffering from bronchitis due to gassing, but, under treatment, gave the ingredients of a cough mixture he had prescribed, with the result that the entire card was filled up with nonessentials. It would have been sufficient to let his successor know that he gave him an anodyne expectorant mixture, after noting the diagnosis and principal symptoms. I had to institute another course in "case reporting on field cards."

Kitchen and Mess

We had five kitchens for the hospital and one for the staff. With the last, my connection was that of a guest, though as post commander I frequently inspected it. I paid my bill, like other officers, and, when the food became monotonous, I grumbled like the rest and encouraged changes in the personnel, until at last I prevailed upon my mess officer to add to his many burdens that of feeding us. From that time on, we had no trouble. Why? Because the mess officer (Captain James W. Reese) had a big machine developed and could buy more economically wholesale than his predecessors who bought foodstuffs whenever they could get them. But, until that machine was developed, one had to watch the kitchens with Argus eyes. Frequently, I would walk into a kitchen unannounced and eat a full meal. One could not even trust the daily menus which were sent to my desk a day before they were served; for, what may appear inviting on paper, not infrequently proved uninviting and indigestible. We had eventually very fine messes. Officers and men who are kept busy have no time for self-pity, but patients who have time hanging heavy on them soon become disgruntled, no matter how good meals be served.

Recreation and Occupational Therapy

Much was done to insure healthy recreation. The Red Cross women maintained a theater, arranged for concerts and dances. During the warm season, baseball afforded healthy distraction. Men were afforded opportunities for education. Women were sent to teach architectural drawing, painting, sculpture, and what not. With one exception (and she was quickly relieved) these young women proved very useful and I supported their work by affording them space and material. Not one of the pupils was ordered on fatigue detail. Some women instructed the men in useful crafts. Even those who were bedridden used their hands in bead work or manufacture of small toys. Only the blind (we had six of them) did not get as much to do as the others. My friend, Captain Henry R. Lesser, a noted eye specialist of New York, did everything possible for them professionally.

Once I entered the eye ward for inspection. As usual, some one in the ward would call "attention!" and those patients who were physically able were to stand near their beds until I ordered them at ease or left the room. Of course, the blind were excused. I made it a practice to talk to many patients on these rounds. I thought, I detected a sign of recognition in the eyes of one of the blind soldiers, a young fellow with an Apollo-like face. Approaching him, I asked him whether he could see me.

"No, Sir, I cannot. But I know you are our colonel. I can tell that by your walk."

"How are you getting on, son?"

"Oh, as well as one could wish. Thanks to your interest and Captain Lesser's care; this is home to me now. Besides, what would I do at home?"

I pressed my hand on the lad's shoulder, turned and left the room abruptly. In the hall, I waved my escort aside. My rounds for that morning were over. Soon after the incident, the blind were sent to the states. There they could be trained for some useful work.

Odd Reasons for Evacuation

Our principal work was the evacuation of the sick and wounded to the United States. During our stay in Bordeaux, we had, of course, a number of trains bringing in wounded patients who were evacuated from hospitals about to be closed.

One day, a convoy was brought in. I saw a number of soldiers who looked well fed, normal, the very picture of health. I remarked to the admitting officer that they must think at the front that ours was an embarkation station. I talked to an intelligent looking man.

"What is your trouble?"

"I have none I know of."

"Who sent you here?"

"Base Hospital No. * * *, Sir."

"Were you wounded at the front?"

"No, sir."

"How do you happen to have been sent to the hospital?"

"The regimental surgeon evacuated me."

"Let me see your card."

The man handed it to me. I looked at the diagnosis. It read: Unsoldierly. Was I dreaming? What was I in—a modern army, or some make-believe army of playing children? Later, the officers told me that in that convoy at least fifty cards contained such "diagnoses" as "illiterate," "temperamentally unfit," "not clean."

It was evident that some line officers did not like these men and got the regimental surgeons to evacuate them. Why the base hospital did not send them back and, what is worse, why it sent them on to us with such audacious reasons, was simply beyond me.

I reported the incident to General Noble. He became a bit excited.

"Send me a detailed report!"

A copy went to the Chief Surgeon. It led to an investigation and to sharp reprimands. We evacuated all these men, but certainly not to The States.

The Chief Surgeon's office, busy as it was, certainly did all it could for us. I have remarked how quickly action came to stop discontent. In the matter of promotions, too, everything possible was done.

Inspection

Most of my recommendations were acted on favorably. Annoyed by letters from politicians and members of soldiers' families who desired, now that the war was over, their return for business reasons, I stood out for a categoric denial, since the patriotism boasted of in the letters was not apparent. In every instance was my decision upheld, even in the face of recommendations by men with political influence. And, whenever I asked that an officer or enlisted man be sent home because he was really needed, my letter was seldom returned with unfavorable action. Occasionally, a note would come from headquarters acknowledging appreciation of our efforts. Just before we evacuated the last thousand patients and closed the hospital, General McCaw and Colonels Fife and Reynolds came to inspect us.

Colonel Charles R. Reynolds had succeeded General Noble, some weeks ago, as base surgoen.

The period of demobilization of the A. E. F. was then well established.

Colonel Reynolds had been at the front as chief surgeon of an army and his task was to superintend the abandonment of all medical institutions throughout the base.

I knew Colonel Reynolds by reputation only. During his administration, which has been highly successful, we were treated with courtesy and a palpable willingness to help. To the very last day, when we closed the doors of the hospital forever, we could rely on his help and advice whenever complications of an unprecedented character left us in doubt what to do. He, like his predecessor, rendered decisions which were based on common sense; for, there was not time enough left to follow routine procedures.

As their automobile entered our park, a detachment of infantry serving as guards at the hospital turned out in honor of the distinguished guests and presented arms. General McCaw inspected the guard and ordered it dismissed. He and Colonels Fife and Reynolds entered the main building. The trumpeters sounded a flourish in salute. Officers, nurses, enlisted men and patients—a total of about two thousand individuals—were drawn up in a long line and inspected. Then the principal groups of buildings were visited.

"Enormous, an enormous place—too bad you could not secure a bird's-eye photograph," the General commented.

It was the proudest moment of my life.

Several weeks before, General Pershing and staff had inspected us. We then had the same formation. He, too, said some kind words to me after the inspection, but now my own chiefs were here, and they were specialists and could see beyond military form. To Colonel Fife, doubtless as much as to any one, I owe my assignment to Bordeaux. He has always supported me, convinced that I would not fail. I hope I have succeeded.

We have cured and discharged to duty nearly two thousand patients. More than seven thousand have been returned to the United States. We have saved many from death. Many have been prevented from becoming cripples. We have inspired love of country in the breasts of many officers, nurses, and men who will be ready to respond to a call—and better qualified for service.

Memorial Day

On Memorial Day, the officers, nurses, a detachment of engineers, and the hospital detachment, headed by a splendid marine band, marched in perfect military formation to the cemetery. There we saluted our dead. When we returned, I called the detachment commanders to the front, thanked them and di-

rected them to take their men through the nearest gates to their barracks. Before me defiled the officers, the nurses, and my own men, a formidable organization for a medical officer to command.

French officers—we had in the hospital several hundred French wounded, for the past two weeks—came to me and said:

"Votre discipline, mon colonel, c'est quelque chose que nous n'avons pas dans nos hôpitaux."

And I, the immigrant, could not help but feel proud of the great honor that had been bestowed on me by my adopted, my real fatherland!

On Kindness

"YOU gave on the way a pleasant smile
And thought no more about it;
It cheered a life that was sad the while
That might have been wrecked without it.
And so for the smile and its fruitage fair
You'll reap a palm sometime—somewhere.

"YOU spoke one day a cheering word
And passed to other duties;
It warmed a heart, new promise stirred,
And painted a life with beauties.
And so for the word with the silent prayer
You'll reap a crown sometime—somewhere.

"YOU lent a hand to a fallen one,
A lift in kindness given;
It saved a soul when help was none
And won a heart for heaven,
And so for the help you proffered there
You'll reap a joy sometime—somewhere."

—Bickers.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

TO our Readers: A few days ago, a middle-aged man called on me and explained that he lived in a small town near Chicago and that the JOURNAL and the Seminar mean spiritual food to him many an evening after the day's work is done. He told me that he has actively participated in the solution of the diverse problems so far presented but felt unable to submit his ideas in writing, as he had absolutely no ability to write. This physician is a graduate from a regular medical college in Chicago, in good standing at the time of his graduation, and therefore he must have had some general education before he undertook the study of medicine. Accordingly, I could not readily believe that he could not write down a problem. Indeed, during our conversation, he discussed the case intelligently. I asked him to pen down the statements on paper, just as he talked with me. The result was that, with a little pruning and editing, I am able to present his views under the pseudonym of "Country, M. D."

The point I desire to make is, that I do not care whether you have writing ability or not, whether you can clothe your thoughts in beautiful phraseology or not. All I ask you is this: Have you sufficient training to understand the problems as presented? Can you solve them? If so, pen down your thoughts as best you can and send the paper to me. I will edit everything except the ideas and, thus, your contributions will prove of value to all readers of the Seminar.

Solution of Surgical Problem No. 5

It is gratifying that the number of solutions received has increased as compared with preceding problems. Of all those received, I shall select three, as constituting discussions most worthy of publication.

The Problem: A young man received a severe blow with a brass controller on the left side of the head, at about 10:30 a. m. He is dressed at a public hospital and sent on. At 2:30 p. m., the patient is seen by you. In addition to the history of trauma, you learn that the patient noticed a weakness in the left leg and, soon after, became unconscious. He is in deep coma; pulse 40; pupils unequal and do not react to candle light. Breathing deep, slow and stertorous. No fracture can be palpated. There is a horse-shoe shaped, contused superficial wound of the scalp over the region of the left fissure of Rolando (approximately). No blood or discharge is visible on examination of nose and ears.

The "requirement" called for a rough estimate of the situation. Discuss, with the limited data available, the probable diagnosis with special reference to the site of the fracture of the skull, if any. Discuss the prognosis. Indicate the proper therapy.

Comment: This case, more fully published in the November issue of the CLINICAL MEDICINE, is, of course, one taken from actual experience. That the data are not sufficient for a really scientific estimate of the situation, is acknowledged. But, the facts are presented as one would be apt to find them in a house, away from facilities for detailed examination.

Nevertheless, I expected at least two criticisms for negligence. When I examined the patient and noted irregularity of the pupils, I should have been more specific as to which eye was more dilated. Again, I mentioned nothing of patellar and other reflexes; yet, these are of some diagnostic importance and (what is not to be overlooked) are signs which can be looked for without appliances. It would have pleased me to be criticized; for, of course, in this as in similar cases, I did not and would not fail to obtain all information possible at my very first examination. While a diagnosis can be made without study of the patellar and other reflexes, these data should have been furnished. I omitted them purposely.

Solution by Colonel George Acheson of Kingston, N. B.

Diagnosis: Evidently, here we have a case of compression, due probably to hemorrhage in the region of the upper part of the fissure of Rolando on the right side, compressing the upper part of the right ascending frontal and possibly also ascending parietal convolutions, as evidenced by paralysis of the left leg.

While there is no depression of the bone or palpable fracture at the site of the blow on the left side, it is reasonable to infer that the blow on the left side caused a fissured fracture, which

extended over the vertex to the right side, and which, with *contrecoup* to the brain, caused laceration of some meningeal vessels at the site above referred to.

If the skull is fractured on the right side, I would expect to find, according to Anan's rule, a fissure radiating from the point struck.

Prognosis: The deepening coma, slowing of respiration and pulse, and pupillary signs point to rather extensive and continued hemorrhage, with resulting increase of the area of compression, which, unless relieved, must terminate fatally.

Even if the bleeding should stop, there is the danger of secondary inflammation of the meninges or brain substance, with sepsis (possibly), giving a very grave prognosis.

Therapy: Under the circumstances, an attempt should be made to relieve the intracranial pressure by trephining over the upper third of the fissure by Rolando on the right side. It might be advisable also to trephine the left side at the site of the blow, where a depressed fracture of the inner table may be found.

In addition, apply the ice cap, clear out the bowel by enema and, perhaps, bleed the patient into his own veins, by the application of venous tourniquets to the proximal extremities of the limbs.

—

Solution by Dr. Isaac E. Crack, Hamilton, Ontario.

Seeing a patient, following a head injury, in a comatose condition, with deep, slow stertorous breathing, slow pulse, and unequal pupils, one thinks immediately of compression of the brain, either from depressed fracture or intracranial hemorrhage. The latter I believe to be the case here. The lucid interval following the blow points very strongly to hemorrhage from a rupture of the middle meningeal artery.

The condition of the pupils would indicate that the hemorrhage is reaching down towards the base of the brain. I do not think that there is a fracture. I believe the hemorrhage to be on the side of the external injury, namely the left side. The somewhat vague history of weakness of the left leg, prior to the coma, is rather confusing. This could be explained by an inquiry to the right side of the brain from *contrecoup*, symptoms of which injury are sometimes late in developing.

Prognosis in the case is extremely grave. The eye symptoms point to involvement of the base of the brain. The only hope for this patient is from an operation with a view of removing the clot, and it should be done by a man with experience in brain surgery.

Solution by "Country, M. D."—Ill.

I estimate the situation to be very serious, because there is pressure on the brain from a clot, which must be very large. This clot must be on the right side, because the left limb showed beginning paralysis. The inequality of the pupils means that the lesion is limited to one side. I cannot tell whether there is a fracture or not; as, for this, an x-ray picture is needed.

In a large city, this man should be sent to the nearest hospital and be placed under the care of a good surgeon. In a place like mine, without a hospital, I would send for help, meantime shave the patient, prepare hot water and so on, and insist that a colleague with surgical experience open the skull on the right side sufficiently wide to enable ligature of the median meningeal artery and removal of the accumulated blood. I would respectfully suggest to close dura, bone and scalp wounds without drainage and await what follows, confident that the patient had been given a fighting chance. If I had sent him to a hospital fifteen miles away or sent for a surgeon from Chicago, the man would have probably died without anything being done.

—

Editorial Comment: Now, readers, are you not a bit proud to see such able men as Colonel Acheson and Dr. Crack come to our rescue and *make* this department? And aren't you a bit hurt that it is always two representatives of a foreign country, men whom I only know through correspondence, who seem to be actively interested? True, I have seventeen or eighteen more letters in my drawer; and, here is a specimen of one:

"I should say, there is no doubt about the case being a fracture on the left side near the base. A trephining may do good, though, if the fracture radiates to the base, the case is probably best let alone and treated with an ice-cap and elevation of the head."

Now I should have probably used this letter as a demonstration how not to approach surgical problems. This physician, who lives in a city of medium size, would (let us hope) not make such a diagnosis; because, if he had not made a "snap" one, but given the matter a few minutes' thought, he would never have sent me the above discussion over his signature. Such solutions are absolutely worthless because irrelevant.

In further commenting on the case within the frame of the data as given, I can only state what would be in my mind were I to visualize the case as of the moment seen. Of course, in actual practice, we would inquire as to head-

aches, vomiting, etc., symptoms which any friend or member of the family present could easily recognize and inform us about. But, in this particular care, we have no such data.

What we do have is this: A healthy young man follows his occupation, gets hit on the left side of his head, is dressed and goes about his business. About three hours later, he complains of motor paresis or paralysis of the left leg and, soon after, is in deep coma. Half an hour later, we note a slow pulse, stertorous breathing, deep coma, absence of pupillary reaction to light and irregularity of the pupils.

The trauma is confirmed by the external wound. There is no physical evidence, at this time, of a fracture. Indeed, I am not especially interested whether there is or is not a fracture, for, there is no doubt of the presence of compression (not pressure) of the brain, and there is also no doubt that this is produced by hemorrhage. The severity of the symptoms point to hemorrhage of the middle meningeal artery and the fact that the paresis showed on the left leg first makes it conclusive that the right vessel is the one lacerated and torn, by *countrecoup* effect. (This was fully confirmed by the subsequent operation.) As regards the eyes, dilatation or contraction being possible in cerebral compression, I attached no special significance to the phenomenon, except to assume that the pupil may not yet have dilated as widely at the side of the lesion as on the other side. My judgment in this proved correct.

Later History: The patient was taken to the hospital. I opened the skull over the anterior branch of the middle meningeal artery (right), tied the torn vessel, washed away the clot and some free blood with normal saline solution, and closed the entire without drainage. The operation lasted 30 minutes and was done without anesthesia.

The pulse increased in frequency, the breathing was hurried for about an hour, then became more regular. Consciousness returned about two hours later. Uneventful recovery.

Surgical Problem No. 7

You are called to see a young woman, about 24 years of age, a domestic, who has been ill for about two days with, what her employer and neighboring physician, who was called in, described as rheumatism of the left elbow.

It is late in the evening and the patient suffers so intensely, in spite of an opiate, that you are called in "to do something".

The left elbow is held by the patient in a flexed position over a pillow. The joint is red, hot and swollen. The least attempt on your part to examine the elbow causes the patient to cry out in great agony. Pulse, 100. Temperature 102° F. The patient looks very ill; exhausted.

Required: Exact diagnosis. (If it cannot be made by the symptoms and findings as given, what causative factor would you look for?) Suggest a non-operative therapy which holds out hope of speedy relief and recovery.

—

Note: On account of lack of space, the "Care of Surgical Patients" and other interesting matter, will be published in the February issue.

—

New Year's Greetings to all my readers!

" . . . We each of us have an inborn conviction that the whole world, with everybody and everything in it, was created as a sort of necessary appendage to ourselves. . . . "

—Jerome, *Idle Thoughts* (On Vanity)

The General Practitioner

Talks About Professional and Personal Problems

Conducted by WM. RITTENHOUSE, M.D.

The Great American Stomach

IT is undeniable that the stomach is the most long-suffering organ of the body. The manner in which people abuse their most important organ and best friend is cleverly hit off in the skit entitled: "Diary of a Flapper's Stomach," in *The American Journal of Public Health*, Chicago. It is merely the experience of a single day and is not as much exaggerated as might be supposed. Here is the stomach's complaint:

"10:00 a. m.—Oh, dear! Another warm day. Wonder if I'll be abused as I was yesterday. If I am, I'm going to strike. Just disposed of a half-chewed breakfast. We ran for the train, which meant, I was so jiggled about and so tired that it took me twice as long to do my work. Hope she gives me an hour or two of complete rest before anything more comes my way.

"10:30 a. m.—Two glasses of ice-water have just arrived. It will take all the energy I can pump up in the next hour just to warm me up to normal again.

"10:50 a. m.—Half-chewed breakfast did not satisfy her and she has bought some peanuts and started again.

"12:00 m.—Peanuts have been drifting along steadily ever since. Think she has finished them, too.

"12:30 p. m.—Decided she wasn't very hungry and, instead of a good solid dinner, sent me down a cold egg-nog heavy with chocolate. Could have managed it all right if it hadn't been so unnaturally cold, but that made it terribly difficult to deal with.

"1:10 p. m.—More ice-water.

"1:40 p. m—Was mistaken about the peanuts; she found another handful in the bottom of her vanity bag, and now I am getting them again.

"2:05 p. m.—More ice-water.

"2:10 p. m.—She has been lifting some heavy books and, as usual, used my muscles instead of her arm muscles. You see, she's never had any proper physical education—soft, flabby, slouchy sort. Tired me almost as much as a six-course dinner.

"3:20 p. m.—Furtive fellow has brought us a box of caramels. Just heard her say: 'Oh, dear! I don't feel a bit well. The milk in that egg-nog must have been sour.'

"6:30 p. m.—We played a set of tennis before dinner and here I am all tired out and a lot of work to do.

"6:50 p. m.—We were invited by a sissy sport with a belt on his coat to have a soda before going home. Had a lemon phosphate and then had to run for a car.

"7:00 p. m.—Fried 'taters, cucumbers, veal cutlets, catsup, cookies and canned blueberries. What do you know about that?

"7:45 p. m.—We are strolling down to the corner with a knock-kneed guy in a sport shirt and white pants for a pineapple-walnut-college-ice.

"8:20 p. m.—Got home and found somebody had made some ice-tea. She drank two glasses. I tried hard to keep the tea and the college ice separated, but they mixed in spite of me. I go on strike.

"8:30 p. m.—I have sent back the college ice and the iced tea.

"8:40 p. m.—Returned the blueberries.

"8:45 p. m.—And the peanuts.

"9:00 p. m.—The devil to pay—can't get the doctor.

"9:17 p. m.—Doctor found at the movies. Mother thinks it's a weak stomach she inherited from her father. Knock-knee suggests it's the beastly weather—the big boob!

"9:45 p. m.—Doctor says it is from a bilious temperament. Good-night!"

If such abuse of our most important organ were limited to the flapper and her kin, the matter would be comparatively unimportant. But it does not require very close observation to discover that a very large proportion of people apply as little consideration to their stomachs as did the poor girl of the "Diary."

The large number of men who break down in or before middle life should lead us to reflect upon the cause, especially as there is a ten-

dency to overlook the true cause.

One is reminded of the old farmer who was extremely fond of roast fresh pork. It was in the fall of the year when the cornfed shoats are at their best—plump, sweet and juicy. He killed one in the morning, and his wife prepared a generous roast from the side of it for dinner—tender, and alternately streaked with fat and lean. He ate very heartily—so heartily, in fact, that his wife protested, fearing that he might be ill. But he ate his fill, finishing off with a large section of mince pie.

At supper time, the cold roast pork was not on the table—his wife had seen to that; but he grumbled and fussed until she yielded and brought it on. He ate freely. When bedtime came, he toasted some cheese over the coals and ate it, and then, for a sort of nightcap, roasted and ate a couple of apples.

What followed, may be imagined.

In the middle of the night, he was taken desperately ill, writhing in the most excruciating pain. The doctor was called and administered an emetic which brought a degree of relief. The next morning, he felt some better, although still sick and weak. A neighbor called to see him and inquired what was the matter. He replied, "Why, I ate some roasted apples before going to bed last night and they nearly killed me. I'll never eat another as long as I live!"

Men, who break down at an age when they ought to be at their best, are very prone to attribute the trouble to a wrong cause. Overwork is the scapegoat which is most often made to bear the blame for the frequent kidney disease, heart disease, high blood pressure, and other disorders of fifty or more years of life. As a matter of fact, most of those people would not take harm from hard work, if they were well nourished and not compelled to overwork their organs of elimination and excretion in order to get rid of the products of too much and too rich food. Many a man who could maintain good health on three moderate meals a day, of plain, wholesome food, persists in indulging in four or more, the extra ones usually late at night and anything but hygienic in character.

Nowhere in the world, is food so plentiful and varied as in America. There may be a few nations that have brought the art of dining to greater perfection; but, nowhere is there such abundance for the ordinary citizen. Putting together the two conditions of abundance of food and ignorance of the principles of scientific nutrition, and it is not surprising if, as a people, we pay the penalty for our eating-habits in damaged health and shortened lives.

Men who work with their muscles, such as farmers, mechanics, etc., can digest and dispose of, for the time being, a much larger amount of food than those of sedentary habits. But, we find kidney disease, high blood pressure, etc., about as prevalent in the country as in the city. So it would seem that the ability to digest food and pass it on out of the stomach is not the only thing of importance, and that the excess taken over what the system requires, may be injurious, no matter what the occupation of the individual.

I have in mind a man whose case is typical and will serve as an illustration. I have known him since he was a boy. He is a farmer of 54, active and apparently in perfect health, so far as appearances go. He has always been a great eater; that is, in quantity of food. The quality of his food has been wholesome. He has rather prided himself on the fact that he could eat large amounts of food and feel no bad effects. He looked with a mild degree of good-natured contempt upon those of his friends who could not follow his example, but who believed that they could best preserve their health by moderate indulgence in wholesome food.

However, the pitcher that goes often to the well will be broken at last. Within the last few months, he has begun to suffer from dizziness, high blood pressure, and other signs of arteriosclerosis. The excessive amounts of food taken during all these years were quietly producing changes in the body tissues which were not apparent at the time, but which at last are making themselves felt.

Those of us who have suffered more or less all our lives from stomachs that do their work but imperfectly, putting us into the great army of dyspeptics, can scarcely be blamed if we look with envy upon the wonderful digestive powers of some of the lower animals. For example, the great serpents of the South African veldt swallow a deer or antelope whole, and their digestive juices are powerful enough to dissolve the whole body, bones, horns and all. So hunters and naturalists tell us at least.

How Your Mail Is Delayed

The Postmaster has requested me to call the attention of readers to a matter that not only adds greatly to the work of postal employees during the holiday season, when they are always overworked, but has also the effect of delaying *all* mail; so that everybody has an interest in the matter.

He says: "During the holiday season, large quantities of very small envelopes and cards are put into the mails, with the result that all postal work is very much retarded and mail disfigured and torn. It is hoped that the public will do everything possible to assist the Post Office force in this their most trying season. The minimum size of cards and envelopes should not be below 2¾ x 4 inches, for the following reasons:

1.—Addresses will be obliterated by the cancelling machines.

2.—They are too small to be handled on facing table, necessitating three extra handlings, with consequent delay not only to this but other mail.

3.—There is delay, because they must be postmarked by hand stamp instead of through machines.

4.—There is delay through difficulty in sorting.

5.—They are liable to loss or damage, as small sizes do not fit in letter packages and cannot be tied securely.

If small cards or envelopes are used, they should be enclosed in an envelope of ordinary size.

Cooperation by the public in this matter will be a boon to the Post Office at a trying time, but will also expedite the handling of all mail.

Questions and Answers

Here is one that keeps cropping up every little while.

"J. P. S." writes: "One of the big city dailies says, in reply to an enquirer, that the expression 'None were' is incorrect, and that it should be 'None was.' If that is so, please give the reason. I always thought it was the other way."

Ans.—The editor of the big city daily must have been napping. The truth is that sometimes "none was" is correct and sometimes "none were." The indefinite pronoun "none" is used in both the singular and the plural. A little study of the following questions and answers will make the matter clear:

"Did you bring my letters from the post office?"

"No, there were none for you." Here "none" means "no letters," and is therefore plural and takes the plural verb "were."

But this question is different:

"Did you order coal?"

"No, there was none in the market."

In this sentence, "none" means "no coal," and is singular, taking the singular verb "was." It is simply the application of the old rule of grammar: "A pronoun agrees with the noun for which it stands, in gender, number, and person."

The frequent misuse of "none" is due to a mistaken idea that it means "no one." There are many places where "none" does not and cannot mean "no one."

When we search the writings of our classical authors of English literature, we find that they use "none" in the plural nearly ten times as often as they do in the singular.

Here are a few instances picked out at random for these articles years ago:

None of these things move me.—St. Paul.

None are for me.—Shakespeare.

None deny there is a God.—Bacon.

None are seen to do it.—Milton.

None are so desolate.—Byron.

None think the great unhappy but the great.—Young.

'Tis with our judgment as our watches, none go just alike, yet each believes his own.—Pope.

Few die and none resign.—Thomas Jefferson.

None linger now upon the plain save those who will not fight again.—Scott.

Many persons have a wrong idea as to what a rule of grammar really is. They imagine that it is a law laid down by some grammarian, much as congress enacts a law. But, the case is quite different. Rules of grammar are not *made;* they are *discovered.* They exist in the language, and are simply *those orderly methods of expression adopted by the best writers to give clearness, force, and beauty to their writings.*

The would-be grammarian, who lays down a law for the rest of the world to follow, is certainly well supplied with assurance. We have plenty of them telling us what we should say and what we should not. They tell us, we must not put an adverb between the two parts of a compound verb, as "Thou shalt *surely* die." If we must say, "Thou surely shalt die," then our greatest writers have all been wrong.

They say we must not end a sentence with a preposition or similar short word—that we must not split an infinitive—and a number of other things. The best writers and speakers do not hamper themselves with petty rules. They use the forms of expression that seem to them most forcible or beautiful, and let the rules take care of themselves.

James Russell Lowell said of Garfield: "The soil out of which such men as he are made, is good to be born *on,* good to live *on,* good to die *for,* and good to be buried *in.*"

The manner in which he ends each clause

with a preposition adds a peculiar force and charm.

—

"L. W. S." writes: "In the September issue of CLINICAL MEDICINE, you make use of the expression 'tastes good.' Is that good English? Is not 'good' an adjective, while you use it as an adverb?"

Ans.—The expression "the food tastes good" is approved by most writers and speakers because it is practically the same as "The food is good," because "tastes" does not express an action but rather a state. When we say, "The food is good," we use "good" as a predicate adjective qualifying "food," and in saying "the food tastes good," the construction is the same. Moreover, what other word would be possible? We cannot say "The food tastes well"; for, that would jar one's grammatical nerve worse than the other. In like manner, we say, "The stove feels warm" just as we say, "The stove is warm." We do not say, "The stove feels warmly."

—

"S. G." asks: "Will you kindly give the pronunciation and meaning of 'Oom,' and 'Fascisti'?"

Ans.—"Oom" was originally pronounced to rhyme with "home," but usage has settled on the pronunciation that rhymes with "room." This has been adopted by the "Standard Dictionary." It is a Dutch word and means "uncle." It is much used by the Boers of South Africa. It is the same word as the German "Oheim," uncle.

"Fascisti" is pronounced "fash-is'-te, *a* as in father, *i* as in this, *e* as in we. The name, which is applied to the new political group in Italy, suggests strength in union, from the old Latin word "fasces," a bundle of rods tied together, which are, of course, stronger than if taken separately.

—

A correspondent asks why I devote so much space in this department to books, literature and grammar. The reason is, because so many of my readers write to me about these subjects. Their letters far outnumber those on any other subject. I interpret this fact to mean that they are interested.

It is but one of many evidences that the public are taking a growing interest in the subject of correct English. It seems that, for some years past, the teaching of English in the public schools has left much to be desired, and many of our young people, when they get out into the business world, find themselves deficient in the ability to express their thoughts in appropriate form.

This department welcomes all readers to write me regarding any subject that interests them most. The department is a year old and the harvest of correspondence has been a rich one.

2920 Warren Ave.

On Vanity

"Come, oh! my brother bucks, let us be vain together. Let us join hands, and help each other to increase our vanity. Let us be vain, not of our trousers and hair, but of brave hearts and working hands, of truth, of purity, of nobility. Let us be too vain to stoop to aught that is mean or base, too vain to say an unkind word or do an unkind act. Let us be vain of being single-hearted, upright gentlemen in the midst of a world of knaves. Let us pride ourselves upon thinking right thoughts, achieving great deeds, living good lives."

—Jerome, *Idle Thoughts.*

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER, M. D.

"Mene Mene Tekel Upharsin"

YES, *indeed,* my brethren, we have been "weighed in the balance" by a jury of journalists and a well accredited Ph. D. and "found wanting." And, my sainted Aunt Maria! how *much* "short weight" we are, would bring tears to the eyes of the common Irish potato, believe you me!

Never, *never,* until this and other equally well-informed (and paid) crusaders began to crusade in certain of the "big" (circulation) monthlies, did I dream that I was, thou wast and he, she or it was (if engaged in the practice of medicine) a "fakir," a "charlatan," an ignorant pretender and, generally, a sort of quasi-scientific prostitute, living luxuriously upon the credulous cretins who make up the public at large—excluding, of course, the CRUSADERS themselves, their families, employers and immediate allies and servitors. It is a horrid thought, but, mebbe (who can tell?), there are even some C. C. P.'s (credulous cretin, NOT "compound cathartic" PILLS) in *that* sacred circle?

Bovine Syphilis—What Is It?

However, that may be, WE, miserable, muddle-headed medicos that we are, stand, today, pilloried against the sky-line as fools, frauds and fakirs of the first magnitude. Worse than that, even; for, have we not—according to one crusader—ignorantly or wilfully gone from house to house and given every one we could catch "bovine syphilis" under pretense of saving them from the smallpox? Then, too, haven't we injected vaccines to cure broken (*wooden* even, perhaps, alas! So perverted are we!) legs? *Haven't we?* Sure we have! So basely ignorant are we, too (there may be a few shining exceptions) that we really believe with that some-time-deceased jester, Jenner, that the milkmaids in England contracted the somewhat annoying but ephemeral eruption they *did* get, from contact with certain pustules which made their appearance upon the udders and teats of the dewey-nosed cows they milked. How fatuously foolish, how credulous, how astoundingly asinine we are and ever have been! Of course, as the erudite educators on crusade point out, the naughty milkmaids had wantonly toyed with things quite other than the teats of milch kine and, thereby, had contracted not the "little" but the *"great"* pox, which fell disease, during their more innocent milking hours, they then themselves conveyed to the 100-percent virtuous cows, thereby bringing a "murrain" on the poor cattle, while (strangely enough) promptly getting rid of "th' pox" themselves!

That "Malefactor," Jenner

Then, mooning along, comes that iniquitously inquisitive idiot, Jenner, and (using about the same line of alleged reasoning that Newton followed when he lay open-mouth under an old apple tree and let wind-falls hit him on the proboscis) drew the disastrous deduction that, if milk-maids who milked cows with what he called "cowpox" didn't get smallpox, then, if everyone were inoculated with cowpox no one would have smallpox! Isn't it puerile and pooffy-wooffy when you come to consider it? *Isn't it?* And, so, being a mountebank and general assabas, he scraped the pus from the gentle bovines and scratched it into gentle —and entirely common—people alike. And they *did* get cowpox and *didn't* get smallpox!

Thus, at one fell swoop, he afflicted the entire civilized human race with "BOVINE SYPHILIS," and we, past masters in assabasity (I simply HAVE to coin a new word to describe our microscopic mentality—the dictionary is sterile) take infinite pains to see that every innocent che-i-ld shall be infected at the very earliest opportunity. For such felonious assault upon his poor little person, we tax his contaminated parents anywhere from fifty cents to two dollars. Moreover, not satisfied with this initial robbery with violence, we insinuate that the procedure ought to be repeated every seven years—and generally see to it that it is. Oh, but we *are* debased; so debased that in our

assabasity and GREED, we even infect ourselves and our offspring—free, gratis, for nothing! It is horrible, *horrible,* HORRIBLE! And then some! *"Bovine* SYPHILIS," my brethren—*you've* given it to thousands of the Creator's innocent and inoffensive creatures and—the irony of it—you are so curdled in the cerebral and cerebellar regions that you have *"syphilitica bovis"* yourself. Isn't that "the bull"—I mean, the limit?

It surely ought to be, but, alack a day, there is, as the old lady said, "more to come." Fearful stuff, too—so fearful that I shudder to mention it. Those magazine crusaders are *so* rough, so unnecessarily cruel in exposing our nakedness. Anyhow, we've got to stand it. So, prepare for the worst.

Drug-Mongers and Such

You are (I am) a credulous "drug-monger" and a "bacterin broker." You are (I am) merely a 1923 model of the "medicine men, itinerant mountebanks and charlatans of all sorts who fooled uneducated yokels with stews of insects or rodents and decoctions of the excreta of animals." *That* is what you are, Mr. M. D.! A certain Ph. D. so supremely intellectual and "advanced" that he considers all moderns LOOK WITH AMUSED TOLERANCE UPON PEOPLE WHO ACCEPT THE LEGENDS OF THE IMMACULATE CONCEPTION AND THE RAISING OF THE DEAD BY CHRIST OR HIS DISCIPLES" says so right out boldly in print. And, he ought to know. He has studied bacteria! That you have succeeded so long in robbing those who looked with confidence to you for succor in time of danger, is entirely due to the fact that "the gullibility of the great body of the plain people of today—to say nothing of the lower strata—is too well known to justify lengthy consideration." "It is," says our inspired Ph. D., "credulity that is the major cause of the child-like awe and ready acceptance of the medical mythology of today." Such credulity "makes it easy for doctors to propagate their myths." Moreover, such credulity is "common as well to the medical profession itself." "This follows quite naturally from the fact that the populace at large forms the raw material (very raw; but, where do the Ph.D.'s come from?—Heaven?) from which physicians are made. It is well known that entrance to a medical college is not based upon a requirement of independence of intellect but upon credits earned in a certain number of years of pre-medical education. Since these can be won by anyone *slightly above the mental capacity of an imbecile,* it is clear that the medical student must be fairly representative of the average citizen" (who is a first-class fool anyhow) "and, consequently, prone to the same aberrations of the intelligence."

All this is, of course, very clear and, to my mind, conclusive evidence that nearly all men *are* fools and that some of the biggest of these have the gift of tongues. For our comfort, let us remember that the industrious and intelligent ant is silent, whereas the coyote and the parrot, who achieve nothing, make an abundance of sound. But it is neither musical nor informative. However, it is one thing to be a natural fool milling around with the other fools of the herd and quite another to be more knave than fool and spend one's energies in fraudulently and feloniously despoiling and materially injuring the more foolish fools in the guise of a Good Samaritan.

Are We Fools? Or Knaves?

And it is precisely this kind of thing the Physician is said to be and to do by the Crusader-in-Chief. In other words, you and I ought to be taken out by the other congenital, non-knavish idiots in our various communities and hung up to air on the nearest telegraph pole. And if we were to get our *true* deserts, we would be parboiled in nice boiling pitch first.

It is, of course, sad enough to see a dignified old bluff of a physician *pickled,* but my very soul shrinks from the contemplation of some eminent internist being soused in hot oil—even though it be *ol. ricini.*

Moreover, personally I have a distinct disinclination to having my cervical vertebrae disarranged—even by a chiropractor of the feminine gender. Therefore, I trust we may be permitted to at least live on—under surveillance, of course, and engaged in some useful (even though foolish) occupation—until the Grim Rider, whom we never have succeeded in definitely defeating, comes to claim us for his own. To continue to practice our alleged "profession" in the face of the mass of damnatory evidence now being advanced against us would, of course, be impossible. WE must, unless we can purge ourselves of the ten thousand and one charges which are being hurled at our devoted (and "stupid") heads, prove our honesty and do something useful—uplifting. I, for example, have almost decided to write a series of articles attacking the Baptist Ministry. I haven't the slightest doubt that I could say things about these gentlemen and their personal and professional habits which would make most spicy "feature stuff" for which the publishers of "Peppy and Popular" magazines would be willing to pay fancy prices. Some

other poor and penitent pill-pusher might turn out a series of articles exposing the absurdity of Law and the laughable lubricity of our Legal Luminaries.

Still another particularly bright (and knavish) medical fool might make a real hit with a few such specials as "The Joker in Journalism" and "The Mud-Made Magazine."

Oh, this world is so full of such squibbulous rings
That I think that we OUGHT to get busy, Old Things!

Yes, there will always be "balm in Gilead," *but, right now,* there ought to be Hell in this U. S. A.!

The Paid Reformer and the Scandal-Mongering Publisher

When any semieducated egomaniac with an inherited gift for sarcasm, invective and diatribe, can so far forget himself as to endeavor to befoul the nest he at least perched on the edge of, he merits, not 'silent contempt' but very active opposition. When publishers, for distinctly sordid ends, print under scare heads, speciously-worded but entirely misleading attacks upon the Great Profession which has stood and still stands alone between the "credulous common people" and profound personal physical disaster, it is time for that profession and those they so faithfully and (usually) successfully serve, to register definite disapproval and materially reduce the circulation of such indecent periodicals. If the great mass of people be, as these writers assert, "credulous and gullible," the more reason that they be not offered a literary diet which to such must prove extremely indigestible and serve moreover to shake their confidence in those who alone can extend them real assistance when health fails or Death untimely threatens.

The Doctor is not now, neither has he ever been, either "fool," "charlatan" or "knave," and the people he serves are perfectly well aware of this fact. Some few fools, charlatans and knaves do exist in the medical profession as in every other walk of life, but it is reasonably safe to say that most of them are there because other fools and knaves demand the kind of service such men alone can offer. Honest and only "ordinarily stupid" people have no difficulty whatever in securing the attention of equally honest and reasonably well qualified practicians.

Practically not one of the sensational and widely advertised articles recently appearing serve any useful purpose whatsoever, but they are indecent, unwarranted and, to a very great extent, untruthful attacks upon a profession which merits public confidence for the simple reason that it has always striven and now even more heroically strives, to make the world a better place to live in and the journey of human beings through it a less hazardous and painful pilgrimage than it was of yore.

It is all very well (for the "knocker") to "knock" the doctor at so much per "knock," or (for the publisher) to publish broadcast such defamatory articles, but it is NOT well for the people who read such literary buncombe, neither is it well for the doctor just striking his gait to find himself the object of insult and ridicule. The people MUST have medical care when sick, and it is essential that they believe in those who hold their lives in their hands. And the doctor, if he is to extend really efficient assistance, must have trust in himself and his resources. If in some emergency the patient declines to accept a therapeutic procedure because he "read in some magazine" that it was dangerous or a "fake," can the doctor be held in any way responsible if the illness has an unsatisfactory termination or he himself experiences that "Oh, what's the use" feeling, which makes for inferior work always and everywhere?

Some Alleged Reforms Injure the Public

The articles then are distinctly inimical to the welfare of the lay people they are supposed to serve—or "educate." They are, moreover, offensive in tone, offer in every line an unwarranted affront to the conscientious self-sacrificing physician, and their publication should be resented in a definite and practical manner. The procedure indicated is, it appears to me, obvious even to the "limited intelligence" of the Physician. He might even develop enough acumen to induce his friends and patients to express their disapproval also.

We humbly admit that we have much to learn, but we have gathered that which was worth while from the experience of our predecessors, and we work hard in the present to make things more perfect tomorrow. We criticize ourselves unmercifully and welcome constructive criticism from any intelligent source. But we do not like to have monkeys throw peanuts into our delicately balanced machine, neither do we appreciate it when assabasses bray "KNAVE! CHARLATAN! FAKIR!" when we are doing all that in us lies to be honest with ourselves and our fellow-men—who, at the end of it all, HAVE, some time, to TRUST us or suffer needlessly and die an untimely death.

The highly intelligent publishers of the high-

ly popular periodicals, now having a wonderful time lambasting the Doctor, might lay off just a moment and ask themselves where *they* would be Now if some reasonably honest and intelligent practician hadn't been available at the right time and, further, where they or their loved ones will be at any hour that accident or illness arrive if some member of the profession—neither Knave, Charlatan or Fakir, can not be readily reached to fight their battle for them and ward off calamity?

As far as the writers of the said articles are concerned, they need, more than anything else, the attention of alienists.

I headed this article, *"Mene Mene Tekel Upharsin,"* and we *have* been weighed and decidedly "found wanting," BUT the balance was held in a palsied hand and the weights were crooked.

Nevertheless, individually and as a body, we shall be "wanting" indeed if we allow such unwarranted and malicious propaganda to pass without expressing our resentment in no uncertain manner.

To be kicked upon the tuberosity of the ischium is to suffer indignity enough, but to further permit someone to twist your nose and cuff your ears, the while calling you opprobrious and entirely inappropriate names, is carrying things a little bit too far for even an M. D. to stand. And, Heaven knows, he's stood for most everything.

Perhaps, if we bucked up and developed a VOICE which could be heard when we raised it, together with a corporate kick ("to be used in emergencies only"), we might have—

"A HAPPY NEW YEAR!"

The Knocker

THE knocker is a curious cuss;
He never starts to whine
Or fling his envious shafts at us
Until our work is fine.
It's only men with skill to do
Real work he tries to block;
And, so, congratulations to
The man the knockers knock.

—Wm. Angus.

Medical World, Nov., 1920, p. 348.

Let's Talk it Over

Active-Principle Materia Medica

With Physiological Effects and Therapeutic Suggestions

By WM. T. THACKERAY, M. D., Fowlerton, Texas

EDITORIAL COMMENT: For some years, the need of a small and practical guide for the every-day use of active-principle remedies has become more insistent; since, unfortunately, those that had been published twenty and more years ago are out of print and since it has been impossible, so far, to find the leisure to issue new editions or new books. Years ago, the little alkaloidal guide by Drs. Silva and Thackeray made many friends. It gives us pleasure to reissue this guide, with suitable amendations and additions, in serial form, as prepared by the junior author of the original publication. Eventually, the little book will be republished in permanent form. Instalments will appear in CLINICAL MEDICINE *from month to month, until the manuscript has been reproduced in full.*—ED.

PREFACE

The works on Therapeutics soon pass out of date, and this, irrespective of the most positive information that they may contain.

A widely used medication and an efficient medicinal agent do not exclude the conception of means of a higher value.

New products of the chemical laboratory are handed to the pharmacologist who, in turn, reveals their usefulness to the clinician, and the latter, after experimental researches, assigns to them a place in our armamentarium.

Substances of old date undergo new associations which prove advantageous; new processes of administration daily see the light, and new applications of old remedies are of not infrequent occurrence.

Periodical literature is an organ for the diffusion of knowledge, but its existence is ephemeral, and with it are side-tracked the stores of information. Besides, the busy practitioner cannot spare the time to hunt up information disseminated throughout a multitude of journals. Harassed by the continuous demands inherent to his profession, he cannot devote his short leisure moments to the perusal of prolix works; he requires compendious books which, by a systematic arrangement of their contents, may at a glance exhibit the most salient points that bear upon the subject. With this in view, the authors have compiled from authentic works such matter as is deemed necessary and to which they have added the product of their own experience; the whole in a condensed form which, they hope, may be accepted by the profession in the same spirit that prompted it.

W. T. THACKERAY, M. D.
C. C. P. SILVA, M. D.

PREFACE TO THE REVISED EDITION

The original of this work dates back some years and, in the interim, many new positive remedies or modifications of old ones have been introduced. To put these before the medical profession in a condensed form as to their prominent physiological effects, their therapeutic uses, as established by clinical experience, and their dosage, is the *raison d'être* of this work.

In keeping with the principle of positive medication, compounds have been avoided. While these are used by many, they may not always meet the conditions for which they are intended and the method adopted allows the prescribing physician to make any combination that the conditions or his experience may dictate.

As many of the concentrations under various terminations are combined principles and have no standard, other than their comparative strength as to the crude drug, they have been omitted as a class. It has been deemed best to introduce only those dependent upon one active principle.

The coaltar synthetics have been omitted for the reason that they are not in accord with active-principle therapy, which commands:

"small doses of positive medicaments frequently repeated to effect," while the coaltar derivatives require massive doses at long intervals. While these may be and are used by many practitioners, their literature is so well known that it would be tautology to include them in this work.

In giving the physiological effects of the various medicaments described, only those which have a positive bearing upon the remedy used and which are necessary to be used during its administration for the protection of both physician and patient have been described. The more complete effects are found in more pretentious works on Materia Medica.

In keeping with that part of this work entitled "Therapeutic Suggestions," two or more remedies to be administered at the same time are mentioned, and they are in accord with the experience of many practitioners.

The dosage given in the following pages is the average minimum dose and as such is prepared in granule or tablet form by all leading pharmaceutical chemists. The full dose, however, is frequently given and is prepared in like manner by the same manufacturers.

I regret to have to record the death of my collaborator in the original of this work, Doctor C. C. P. Silva, and also the demise of Drs. W. F. Waugh and W. C. Abbott, to all of whom I am indebted for much information herein contained. I am happy, though, to express my gratitude to Prof. J. Uri Lloyd for like courtesies.

I can only reiterate the last sentence of the preface of the original work, and say that I hope my effort will be received in the same spirit as that in which it is issued.

W. T. THACKERAY.

ACTIVE-PRINCIPLE MATERIA MEDICA

With Physiological Effects and Therapeutic Suggestions

Aconitine

THE principal alkaloid obtained from the roots of Aconitum napellus and Aconitum ferox. The latter is generally the source of supply because of its greater yield.

Physiological effects: 1/500 grain, allowed to dissolve slowly in the mouth, will in a few moments provoke a sense of numbness of the buccal cavity and fauces, followed by difficulty in swallowing due to constriction of the throat. The systemic effects follow within fifteen minutes after its administration.

The number and force of the heart beats are reduced, respiration is slowed, the arterial tension lowered, the activity of the sweat glands and that of the kidneys is augmented, which fact constitutes this agent one of the most reliable of antipyretics. It also acts as a mild cholagog. The sensory and motor nerves are affected by Aconitine as well as the vasomotor system. The analgesic effect commences at the peripheral sensory nerves, the nerve trunks follow and finally the centers in the cord. The motor nerves are affected after the sensory.

A painful numbness affects the limbs, fingers and toes, and a general tremor of the whole body is experienced.

In toxic doses, all the physiological effects are heightened and death occurs by cardiac paralysis in diastole.

Therapeutics: Useful in all pyrexias and inflammatory conditions, to control hyperthermia and lessen vascular orgasms.

In all conditions of irritability of the gastro-intestinal and respiratory apparatus, its action is most satisfactory.

In hyperthermia, it should be administered in combination with digitalin and veratrine if the pulse is full and hard, and with strychnine if there is adynamia.

Burggraeve suggested its use as a preventive of inflammatory accidents following severe surgical operations and accouchements.

Dosage: 1/500 grain, in acute affections, every fifteen minutes or at longer intervals as indicated.

In chronic cases, 1/250 grain may be given three or four times daily, the thermometer should be the constant guide when using Aconitine.

Doctor Shaller advises, for children, that 1/800 grain for each year of the child's age, and one extra, be dissolved in twenty-four teaspoonfuls of water; the dose of this solution being one teaspoonful every ten to sixty minutes, pushing to effect.

The administration, in all cases, should be suspended if the toxic action of the drug is in evidence.

Aconitine hydrobromide: The chemist and clinician have demonstrated that this salt of aconitine is more soluble and more rapid in action than the alkaloid and, while the physiological effects and therapeutic uses are the same, the dosage is decreased to 1/800 grain, to be given every fifteen or thirty minutes until the pulse softens and the fever subsides; then as needed.

Adonidin

A glucoside from the Adonis vernalis.

Physiological effects: it slows the heart action,

lengthens the interval between beats; it raises vascular tension by contracting the arterioles. It also acts as a diuretic, increasing the flow of both fluids and solids. It is less cumulative and more rapid in action than digitalis. Many physicians find adonidin to be an admirable alternate for digitalis and it may be substituted for it in many cases with advantage.

Therapeutics: Adonidin acts more quickly and also more powerful than digitalin and, in some cases, appears to have greater curative power; it is indicated in all cases where either digitalin, strophanthin or sparteine may be used.

Dosage: 1/64 grain, repeated every fifteen or thirty minutes, until effect in acute cases; then *pro re nata*. In chronic cases 1/64 grain every three or four hours.

Aesculin

The bitter principle from the bark of Aesculus hippocastanum.

Physiological effects: There is little to say upon this subject, except, that aesculin relieves capillary stasis and vascular engorgement.

Therapeutics: It is useful in the difficult breathing of asthma when not paroxysmal in character. It is an effective remedy for internal hemorrhoids, proctitis, rectal neuralgia and pruritus ani. It is also indicated in congestion of the abdominal viscera.

Elimination with salines is a necessity in the use of aesculin.

Dosage: From 1/64 to 1/12 grain, every two to four hours.

Agaricin

The active principle of Polyporus officinalis.

Physiological effects: In small doses, it lessens the secretions of the salivary, mucous, sweat and milk glands; in large doses, it stimulates them and also causes vomiting and purging.

Therapeutics: Most useful in the treatment of night sweats.

Its action is slower than that of atropine. Useful in obstinate remittents with brief chills and prolonged fever, little or no sweating but jaundiced.

Dosage: 1/12 grain from three to six hours before retiring, in anticipation of the sweat, and repeated *pro re nata*. Atropine antagonizes agaricin.

Aloin

A neutral principle from Aloe Barbadensis, Aloe socotreria and Aloe vulgaris.

Physiological effects: Acts as a slow but powerful cathartic and hepatic stimulant, with special action upon the muscular coat of the large intestine rather than upon the glandular secretions, so that the evacuations produced by it are seldom watery. Also acts upon the female organs of generation as an emmenagog. When frequently repeated, it is apt to irritate the rectum.

Therapeutics: Very useful in constipation depending upon torpor of the lower bowel and in amenorrhea dependent upon anemia of the pelvic viscera. Griping is lessened by combining it with atropine and peristalsis increased by strychnine.

Dosage: 1/12 grain, three times daily before meals, and the same on retiring. The daily dose may be decreased, until at length the drug can be altogether discontinued.

Ammonium Benzoate

Physiological effects: A mild stimulant to the mucous, urinary and sudoriferous secretions.

Therapeutics: Tonic, antiseptic and expectorant. Indicated in bronchorrhea, high urinary acidity and in atonic cystitis.

Very useful in the coughs of children, especially whooping cough, to promote expectoration.

Dosage: 1/6 to 1 grain, well diluted every half to one hour *pro re nata*.

Ammonium Salicylate

Physiological effects: Similar to those of salicylic acid, but its action on the heart is less marked. It is a valuable antiseptic.

[*To be continued.*]

TREATING NEPHRITIS

For some time, I have been thinking of making a report of a case, treated about 4 years ago and with such good results that, doubtless, many will think (as one of our Guthrie surgeons remarked) that one might rather question my veracity in this case. The hints regarding treatment of such cases were obtained from the late Dr. Burgess' writings.

The call came at about 9 o'clock and found me with a well-developed case of lumbago (myself) on hand.

The father reported that the boy, about 10 years old, was struggling for breath; that feet, face, hands and in fact all parts of the body were swelling, and he was afraid the boy could not live until morning.

At that time, I had just finished reading Burgess' description of this most wonderful remedy in the world, Epsom Salts. As they had no other medicine in the house, it occurred to me that we had better try that line of treatment until morning; so the father was instructed to bathe the boy with hot Epsom-salt solution for

at least 10 to 15 minutes every hour, until morning, and that I would then come out to see him.

Imagine my surprise, in the morning, to hear that the boy was so much better that they were going to bring him in to see me.

There was still swelling, as before, but not nearly so much of it. I noted marked puffiness under the eyes.

A test of the urine revealed, as suspected, that it was heavily loaded with albumin.

With so much improvement apparent to even the patient and his family, in 12 hours, there was no need of any change; so, the father was instructed to give the bath, containing 1 ounce of Epsom salt to each pint of hot water, every hour, as long as any of the swelling lasted; also 10 grains of the remedy internally every hour until the bowels were moving freely, and nothing to eat except Bullison's soup (1 pint water with 1 tablespoon of corn meal boiled ½ hour); no more than this every 4 hours.

This treatment was faithfully carried out, due in part to the patient's grandmother appearing on the scene and telling them that dropsy would surely kill the boy.

Sunday morning, just 60 hours after Epsom-salt bathing was commenced, all the dropsy had disappeared and the urine contained only a very small amount of albumin.

The boy was kept on this diet for nearly two weeks, when he again started to school. He has remained well now more than four years.

The bathing should be done frequently, the child should be covered with warm clothing to induce free perspiration which, as a rule, is very sticky and should be wiped off frequently with a dry coarse cloth.

This may not be textbook treatment; but, certainly, it has proved effective in my hands.

W. M. Hatfield.

Mulhall, Oklahoma.

A CASE OF BRONCHOPNEUMONIA

I just came in from a case of bronchopneumonia in a child a year and a half old, that presents so many interesting points in the diagnosis and treatment of this disease that I thought it would be well to submit a report of it.

I was called to attend this child, Sept. 6th, at the home, 18 miles from town. I saw her at 2:30 p. m. She had had a convulsion at 11 a. m. followed by a rapid rise of temperature to 104° F., axillary. When I saw her, she was somewhat stuporous, but easily aroused and fully aware of her surroundings. I mention this in detail, because I think that the mental state helps us to form an opinion of the degree of toxemia. To simply state that the patient has stupor, without qualifying the degree of this stupor, does not give any adequate idea of the patient's condition. That is one of the reasons why the beginner has difficulty in diagnosing his cases from textbook descriptions.

The abdomen was flat and soft, so I could devote myself to obtaining a history of the illness. The first subject of inquiry was the gastrointestinal tract. The child had had a vomiting spell, late in the preceding evening, followed by a severe diarrhea—seven or eight watery mucous stools free from blood. She had not taken any food since. The mother had given her castor oil immediately after the convulsion, which was retained. There had been no constipation nor disturbance of peristalsis previous to this.

The next step in the diagnosis was, to determine whether or not the gastrointestinal infection was primary or secondary to some other disorder. I have already mentioned that the abdomen presented no signs of an inflammatory focus in the peritoneal cavity. I inquired then if she had had a cold. Yes, she had been coughing for several days. The whole family of ten had had colds. Ah, these colds! How lightly is this enfilading attack of the unseen enemy regarded! I proceeded then to examine ears, nose, cervical glands, thorax:—all negative. There had been no nasal discharge; a cough only, and a little restlessness the first two nights.

One would, no doubt, be justified in concluding that this was an ordinary case of cholera infantum. There was no cyanosis, no dyspnea, none of the classic symptoms of pneumonia but a bronchial cough. I prescribed 5 grs. of bismuth, 1 gr. of soda, 5 minims of paregoric, followed every five hours by half the initial dose. I directed that a teaspoonful of milk of magnesia be given, 36 hours later, to insure proper elimination after the initial dose. I withheld all food for twenty-four hours, although water by mouth was permitted. After the first twenty-four hours, a thin, slightly sweetened oatmeal gruel was allowed—a few teaspoonfuls every two hours.

While I was giving these directions, the child coughed. I tell you, that cough had an ominous sound to it. It awakened a lot of subconscious impressions stored up from previous experiences and, while I do not doubt that this practice, of allowing one's self to be guided by "hunches," or vague intuitions, may lead into error and is "very unscientific," still, it does not do to ignore such impressions. We all most

likely have many conceptions which we have never analyzed into their elements, but which analysis would prove to be quite true. It may be, too, that, with the necessity of diagnosing our cases largely from symptoms, we general practitioners are apt to attach more significance to some individual sign than a careful comparative study would really justify. Nevertheless, aside from the spasmodic postinfluenzal cough, I differentiate at least two kinds of bronchial cough, one a short staccato with little sputum and the other what is commonly called a loose cough. Most mothers make this distinction, but you don't see much of it in medical literature. Osler describes it somewhat, but he does not give it any diagnostic importance. Maybe I overestimate it—if so, it proved to be a fortunate decision in this case. I gave the patient between 3 and 4 minims of a mixed influenza vaccine, amounting to about 250 million organisms. Good-sized doses are well tolerated by infants of this age.

I saw the patient four days later, advising by telephone in the meantime. The condition was practically the same. The temperature ranged from 100 to 102½° F. There had been an interval of normal temperature, the second day after the administration of the vaccine. The stools were still very frequent. Perhaps, if this patient could have had a second vaccine injection when the temperature began to go up after the return to normal, the infection could have been definitely arrested. But, I did not give this, for two reason. First, I was not positive as to my diagnosis, and, second, this subsequent rise usually is not of a grave nature and very seldom calls for a second inoculation. Upon my second visit, however, there was no indication of the temperature abating, and I discovered numerous rales, especially at the right base. The mental condition and circulation were very good. The baby would ask for water and smile at those around her. There was a decided flush to one side of her face, and I am inclined to think that this sign is of value in pneumonia, although I have seen it on the side opposite to the consolidated lung. The mother called my attention to it. I like to give these mothers plenty of credit. I have learned a lot of medicine from them, and I am not ashamed of it. A lot of their notions may be rank empiricism, but many of those scoffers at empiricism remind me of the prophet's saying about "A fool wise in his own folly."

Well, to make assurance doubly sure, I gave her another vaccine injection a little smaller than the initial dose. Three nights later, I skidded up the hill in a heavy rain and spent the night with the patient. Temperature about the same, pulse good, respiration 52, color good, mental condition worse, indifferent to her surroundings, little inclination to take nourishment, stools greatly improved. I withdrew the bismuth sedative and prescribed a mild expectorant containing a minute dose of strychnine. I also ordered a daily tepid bath followed by general massage, and camphorated oil and turpentine to thorax—front and back.

A few days later, she showed some signs of nausea, and stools became more frequent. I discontinued the expectorant and gave caffeine citrate, gr. 1/10, twice daily. I changed feedings to dextrinized wheat flour and boiled skim milk. Two weeks after onset, the fever ended by crisis and the convalescence was uninterrupted.

There are many other points that I think are worthy of discussion, but I fear I have already laid myself open to being accused of tedious repetition of well-known facts in an altogether too common a disease. The important essentials are:

1.—The frequency of intestinal catarrh in bronchopneumonia of children.

2.—The absence of physical signs at onset.

3.—Early vaccine inoculation.

4.—Careful judgment in medication—avoiding irritation of intestinal tract and yet providing sufficient elimination.

5.—Support of circulation by baths, massage, rubifacients judiciously applied.

6.—Non-putrefactive, non-acidophilic diet.

G. J. WARNSHUIS.

Forman, N. D.

—

[Doctor Warnshuis' report gains materially in value on account of the comments with which he intersperses the report itself. It is interesting to follow the doctor in his reasonings and conclusions. It is, no less, instructive and suggestive to find that it is wise not to neglect a "hunch." While it must be admitted that it would be a serious mistake to act on a hunch, invariably, it nevertheless happens frequently enough that a socalled hunch is merely a suggestion made by the subsconcious which observes and reasons far more quickly than the conscious and may make serviceable impressions upon it.

There does not seem to be any need for insisting on the differentiation of coughs with different characteristics. Surely, there are varieties of cough and, with equal certainty, they do not all have the same significance. A cough may arouse but casual attention; another cough may make us sit up and take notice; a

third cough may fill us with dread anticipation of trouble to come. Pathogenic symptoms, like cough, should be studied carefully in every individual case. This particular symptom happens to be early enough to enable us in many cases to ward off serious trouble.—ED.]

POLYGLAND THERAPY

It is not my purpose in this brief paper to enter into any discussion as to the physiological action of the different hormones, but merely to give to the reader the results of over ten years' experience with a polygland mixture. The formula which I have in mind is as follows:

Pituitary	5%
Thyroid	10%
Ovarian	40%
Testicular	45%

It is only necessary to state that this formula was arrived at after long experience and many trials and has been found the most satisfactory by me. My choice of administration is by hypodermatic injection at the beginning of the treatment, following later by oral administration if necessary. My reason for this method is—

1.—That I get the system more quickly under the influence of these hormones;

2.—That I have my patients under my observation and control until the case is well in hand.

The class of cases benefitted by this treatment may be divided into two groups as follows:

1.—Those in which this treatment exerts to all practical purposes a specific action;

2.—A large number of chronic conditions in which this formula may be used to great advantage in conjunction with other treatments.

Under group one we have, first, *Pregnancy.* In all cases of pregnancy, it has been my routine treatment to administer the above formula. It checks hyperemesis very quickly, it has also a beneficial tonic effect upon the patients, who feel better, eat better, sleep better. From my clinical experience, I fully believe also that their pains are more efficient at the time of parturition and that the treatment greatly lessens the danger of puerperal infection. From my experience, I conclude that it should be adopted by all obstetricians as a routine treatment.

Chorea:—Every practitioner meets with many cases of chorea in the adolescent girl and boy. In my opinion, it is a disturbed gonad function in the male, and ovarian in the female, that is the cause of the chorea. In these cases, I never use arsenic or any of the older remedies; the polygland mixture is my sole treatment. The disease is controlled very readily and the same gratifying result may be obtained in every case of true chorea.

Surgical Menopause:—All cases of panhysterectomy should be put upon this polygland formula immediately after operation and kept under treatment and observation on and off for at least one year. This will save these women from years of suffering. I have at present several such patients, one operated ten years ago, one four years ago, one two years ago, who had no such treatment after operation and who have suffered ever since the operation but have improved remarkably within ten days to two weeks, by this treatment.

Menopause:—Those women in whom the endocrine adjustment does not take place readily at this time of life and who suffer from the many unpleasant symptoms, such as hot flashes, numbness of hands and feet, headaches, digestive disturbances, etc., are benefitted readily.

Second group: Chronic diseases in which this formula is used in conjunction with other treatments. We have in practically all chronic conditions a distinct disturbance of metabolism in which there is a much diminished cellular activity; the most common of these conditions, in my own experience, are neurasthenia, chronic nephritis, arteriosclerosis, chronic duodenal ulcer, diabetes mellitus.

Neurasthenia:—In these cases, undoubtedly the phosphorus metabolism is benefitted. In conjunction, I use baths, exercise and diet.

Chronic Nephritis:—In these cases, the tonic effect of the polygland mixture is very beneficial with the use of almond emulsions, diet, duodenal washings, etc.

Arteriosclerosis:—I have had considerable success by alternating a polygland mixture with solution of Titanium Superoxide.

Chronic Duodenal Ulcer:—In many of these cases, we have a distinct upset of the phosphorus metabolism, and the polygland mixture benefits this type very much. Of course, I also use duodenal washings with chlorinated cerium albuminate and sodium phosphate solution.

Diabetes Mellitus:—In that type of diabetes mellitus which appears at the menopause, (see *Amer. Jour. Clin. Med.*, May and Sept., 1922) and which I believed to be endocrine in origin, the use of polygland mixture is really the basis of my treatment. In these cases, I also use duodenal washings and a tablet containing the rarer elements Columbium, Titanium and Uranium.

My method of administration is, to give 1 Cc. hypodermically every 24 hours for at least 20 days. In cases which are more severe or where I have to gain full control of my patient, I increase the number of treatments. After the hypodermatic administration is finished, I advise oral administration of the same mixture.

The following are a few case reports:

Neurasthenia: O. P., male, age 50, ship captain; for past several years, had complained of indigestion with flatulence, became very irritable, depressed at times. From an unusually robust man, he became weak and tired easily; music irritated him very much; could not attend theater or church; became very nervous. Had been under the treatment of several physicians at different times. Before coming to me, had been in a sanatorium for two months. Left sanatorium because he became very weak and symptoms became aggravated. After physical examination and laboratory test, I made a diagnosis of chronic duodenitis and neurasthenia. Blood-pressure 110-90. Gave alternating doses of 2 Cc. of "Polygland" and 1 Cc. of the following "Neurasthenic combination":

Iron Cacodylate	0.03 Gm.
Strychn. Cacodylate	0.001 Gm.
Sod. arsenate	0.001 Gm.
Sod. glycerophos.	0.10 Gm.

Duodenal washings with medicated soap, and sodium phosphate, followed later by duodenal washings with 10% red wine solution (for distinct effect of the various tannates in the wine). After six weeks' treatment, he is at present very much improved; has gained 20 pounds. Symptoms almost entirely relieved; blood pressure 150-90.

Chorea: N. S., male, age 15. Diagnosis made about one year before seeing patient. Choreic movements very pronounced, speech interfered with, had been treated by several doctors who used arsenic, bromides etc. with but slight temporary improvement. Under a month's treatment of polygland mixture by hypodermatic use, symptoms entirely cleared up. Slight return of symptoms for a few days, at two different times, about a month apart. About eight months after beginning of treatment, boy is now entirely well and has been for some time free of symptoms.

Surgical Menopause: Mrs. A. G., age 39, panhysterectomy performed 1912. Very nervous, weak, tired, indigestion, insomnia, headache. At present, under treatment of six weeks, remarkable change in patient. The symptoms disappeared. Patient is now cheerful and happy.

Menopause: Mrs. J. R., age 50, last period at age 48, Vertigo, hot flashes, numbness of hands and feet, backache, pains in legs, melancholia. Treatment started about three months ago; now taking polygland mixture by mouth two weeks out of each month, all symptoms practically disappeared.

In conclusion, I might state that, as a result of my own experience with this formula, my opinion is that it is a valuable therapeutic agent and that its field of usefulness is very wide. As I have stated before, in many cases it is the sole remedial agent needed and in other cases it is a valuable adjuvant.

Rob't F. McDonald.

Brooklyn, N. Y.

QUACKERY PROBLEMS WITH SPECIAL REFERENCE TO THE CHIROPRACTOR

Much has been said during the past few years by members of the various medical organizations, in discussion as well as in the literature, concerning the menace of this increasingly grave problem which unquestionably merits our very earnest attention and endeavors, at this time.

One of the things that may be properly considered, first, is, where the chief responsibility for the evidently flourishing condition of the ever increasing multitude of quacks may be properly placed.

Among the vast army of pestiferous parasities that infest the land, especial attention may be given to the chiropractors, for the reason, first, that their numbers have recently been, and still are being, more rapidly augmented than perhaps any other, which increase may be accounted for by a consideration of certain things existing both within and without the regular medical profession. As some of the causative factors which arise outside our own ranks might be mentioned, the somewhat clever method of advertising employed by the proprietors of the diploma mills where the applicants for the "chiro-doc" degree are turned loose upon an unprotected public after a brief sojourn within their temples of "knowledge", where, too, a zeal perhaps worthy of a better cause is instilled into the faithful in lieu of scientific knowledge and acumen. Again, the fact of the well-known gullibility of the public must be considered, with their special predilection for being humbugged, and the significance of the protection afforded these "backbone-manipulators" by the state, in licensure, etc., thus allowing them to compete with the regulars (so called) who might well be

here designated as "the goats"; this in every instance where state and government legislation is concerned.

I have mentioned a few of the "reasons why," which exist outside our own ranks; and, now, I desire to remind you of one or two things within our ranks which may in part, account for at least the perpetuation of this particular "thorn in the flesh." I refer now to the prevalent and deplorable state of apathy which afflicts a goodly percentage of the members of the medical profession concerning the increasing importance of this menace, which apathy and inertia is taken advantage of by organized quackdom with a considerable degree of success and accomplishment, as can readily be seen by anyone who has kept in touch with medical legislation and other signs of the times during the past few years.

—

Let us now examine into the claims of the "chiro-charlatans," attempt to determine whether or not there is any virtue in their methods of adjustment through their own-established manipulative measures.

Their doctrine (if it may be called such), as I understand it, is, that all the ills with which the human economy may be afflicted are directly due to the impingement of one or more of the spinal vertebræ upon some nerve trunk which impingement is ostensibly due to a subluxation, or displacement, of this vertebra, or these vertebræ, as the case may be; and that all that is required to render said afflicted one whole again is, to submit to their specially-devised technic of thrusting and pounding, which slams the obstreperous backbone-segment back into its proper seat. This asseveration is manifestly too absurd to call for even a denial by anyone who has even a fair knowledge of the various physiological and pathological processes of the body, albeit there are many seemingly fairly intelligent persons among the laity who swallow this gibberish without the evidence of a doubt.

Granting, as we may, that this clan may, occasionally (if we believe the statements of some of their patients), get results in a limited number of the cases which they treat, it is of importance to know how these seemingly favorable results are secured. This can be discovered, I think, by a study of the chiro and his subject.

It will be agreed, I think, that a vast majority of diseases are self-limited; that is, that they will run a more or less definite course, ending in recovery, regardless of the method of treatment employed. Also that there are many other disorders that will respond within a reasonable length of time to one of several methods of treatment. Here, too, must the all-important influence of the mind over the physical functions of the body be recognized and accredited; likewise, must the amelioration of some of the functional disorders, particularly those affecting the nervous system by an induced psychological state be admitted. These facts being recognized, we can thereby, in all probability, account for the majority of the socalled cures which we not infrequently hear about. But, let us admit likewise that there are also encountered, from time to time, cases where there exist displacements, or subluxations, of the vertebræ, which conditions will yield to well-directed manipulative procedures, and, given a subject who has fallen into the hands of one of the chiros and who claims to have visited several of the "regulars" without having received any benefit, and who now declares that the skilled operator has accomplished the near-miracle of a cure, is it unreasonable to expect that he would be slow to impart the information to his friends and acquaintances, thus affording a fruitful means of assisting the marvelous healer to increase his local fame and garner more shekels the while?

That this somewhat exasperating condition of affairs prevails in our midst, is well known to all of us.

And, now, a consideration of what steps should be taken to remedy conditions above mentioned.

So far as I am personally aware, there has been nothing of any consequence accomplished thus far by any individual or organization which would tend in any appreciable degree to place a direct hinderance upon the exploitation of a notoriously gullible public by these parasites; and little has been attempted, except criticism for the most part. I do not wish to be understood here, as attempting to inveigh against a constructive form of criticism, for, I agree that this is well merited against this particular aggregation of quacks. But, I do wish to admonish, that criticism and condemnation alone will get us nowhere in the accomplishment of the end desired, viz.: a suppression of, or at least a control over, the conditions which now prevail and which make possible the existence of these charlatans.

We should realize at the outset, that it will require the combined efforts of the entire medical profession to wage an effective warfare and to eradicate the ravages which an organized quackery has wrought. They are apparently better organized than we, and it should not be necessary to effect any special organization to cope with this problem, if it were possible to

awaken to a sense of duty the members of our present medical societies. Yet, it may prove to be necessary to have an organization for business, also, in addition to the present ones which now functionate rather along the lines of scientific advancement and the promotion of the public welfare. In this connection, the thought occurs that, in effecting such an organization, it might not be amiss to pattern to some extent after some of the well-known organizations in the industrial world, this without sacrificing one iota of our self-respect or professional ideals. These organizations, or some of them, at least, get what they go after, which is more than we can say for ourselves thus far.

It is time to let it be understood that we are driven to the adoption of radical measures for self-protection by the imposition of detrimental and vicious state and government legislation aided and abetted by a more or less unenlightened and somewhat unappreciative public, also by a pernicious form of propaganda and by the outlandish lies which the chiros send out by way of the press and in other ways.

Just how and where this fight shall be initiated, is a question for the most enlightened and most sturdy warriors of the profession to ponder. Will our esteemed parent organization deign to raise the battle cry and carry the banner for us to a deserved victory? Or may we expect a similar apathy as that which has characterized their previous actions and contributed a "dud," as in the year of our Lord, 1921, which will be recalled by many with chagrin? In the words of the illustrious Patrick Henry, uttered upon a memorable occasion "we know of no way of judging of the future except by the past" and, judging from the past—enough said.

It is essential to our success in this fight to rededicate ourselves to the all-important task of, first, enlisting the interest of the entire reputable medical profession, if possible. Then, after they are awakened to the menace of present-day quackery, all shall contribute their active support in this campaign, or at least their moral and, if needed, their financial assistance. They should refuse to patronize the editors of the local publications who carry the ridiculous advertisements of these quacks, and should otherwise take them to task if necessary; also take severely to task any member of the medical profession who is guilty of the almost incredibly scandalous conduct which has been charged, (to my personal knowledge) of covertly working with the chiro-charlatans. The establishment of a closer bond of professional and social relations among our members is likewise here of importance, realizing that this has in the past been too greatly neglected, realizing also, that we have a common interest in the enemy at our doors, through which the necessity of presenting a united front is made obvious.

We must further strive, in our professional work, to avail ourselves of every known means of, first, attempting to arrive at a proper diagnosis of the case presented. This done, so far as is possible, to make use of every known therapeutic measure calculated to bring about an amelioration of the pathological state present. In this way, it is possible to keep many of the present quack "customers" in our own hands, with probable benefit to the patient and to ourselves.

I have remarked that we should use, whenever the indication is present, every known therapeutic measure of presumable value, and it is not improper here to offer the thought that, if, after an impartial investigation, it be determined that manipulative measures similar to or identical with those employed by the fakers have some virtue, at least to a limited extent, then we should not hesitate to make use of them when possible to do so. This, I think, may be done with both credit and profit to ourselves.

A final word in conclusion of this paper is, to re-assert, that, unless some concerted action is taken, soon, by members of the medical profession, to bring about a radical change in the existing state of affairs with reference to organized quackery and its practices, which is one of the reasons why the 1921 suicide list was headed by physicians, we shall one of these fine days awaken to the fact that now the "back to the farm movement" has received a great impetus, and 'twere perhaps better that some of us had not forsaken our original rural habitats.

A. Milton Cox.

Argo, Ill.

THE CHIROPRACTOR PROBLEM

It may be stated at the outset that the writer of this article is not a physician but is discussing, from the viewpoint of the layman, a certain problem which confronts physicians—the problem of the chiropractor; but which interests laymen and physicians alike.

It probably is not too much to say that, in every town of the United States, the practicing physicians are losing thousands of dollars annually through the competition of the chiropractors, and, more important still, many per-

sons die needlessly because of these gentry being called in in cases where prompt medical attention is essential if the patient is to have a proper chance for recovery. It is not only the ignorant and uneducated persons that patronize the chiropractor; many people of education and refinement, people who should know better, are misled by the glib talk of "subluxated vertebræ" and "impinged nerves," and are firmly convinced that all human ills can be corrected by a tampering with the backbone.

The initial strength of the chiropractor, of course, comes from his advertising. The ethics of a physician very properly do not permit him to advertise other than by the use of a simple "card" in the newspapers. Consequently, when the chiropractor has half a page of cleverly written publicity, illustrated with striking cuts of subluxated vertebræ and with "before and after taking" pictures, it is no wonder that many persons overlook the small and dignified card of the physician for the blatant professions of the interloper. Most of the chiropractor ads are written by able men in the advertising field and contain a line of "sales talk" which very effectively converts a considerable number of people.

A year or two ago, chiropractors in various parts of the country carried large space in the newspapers telling of a marvelous cure said to have been wrought on some boy in one of the northern states by the "science of chiropractic." It was a sensational sort of a story and attracted much attention. A doctor friend of mine has since told me that the advertisement consisted of misstatements and misrepresentations and that a complete exposé of the claims of the chiropractors in this particular case had been published in one of the medical magazines. Only physicians were subscribers to that magazine, however, and they doubtless knew already that the story as printed must be a false one. The general public, which was the one that the advertisement was designed to mislead, never had but the one side presented to it and, consequently, the affair was a great boost for the chiropractors and a corresponding blow to physicians.

—

The feeling among the medical fraternity against advertising by individual physicians is insurmountably strong, and rightly so. This brings us to the problem which has been confronting physicians for several years: What can be done to counteract the pernicious activities of the chiropractor? It is to suggest a solution, that this article has been written.

It is not ethical for physicians to advertise as individuals, but there certainly could be nothing objectionable in a national organization of medical men carrying on a campaign of education through the columns of newspapers and magazines, explaining why a reputable physician should be called in case of illness. A series of ads like this would be carefully perused by those who need the enlightenment most, and such publicity would carry conviction—the truth is always convincing when properly presented. If every practicing doctor in the United States is losing hundreds of dollars each year from the competition mentioned, there will be few but who are willing to stand an assessment to help put the chiropractor out of business—and such a campaign, properly organized and carried out, would most certainly do this very thing. The American public is a thoughtful and intelligent one, although a certain portion of it is misled from time to time on matters that are not popularly understood. Once the true situation is placed clearly before it in language it can understand, it will take the sensible course. The "science of chiropractic" will not be able to withstand the light of publicity.

A campaign such as this would result in the saving of thousands of lives. Surely, there can be nothing unethical in that merely because it would also result in increased revenues for true healers who are devoting their lives to preserving the health of the human race by the best methods known to science. Here is certainly a case where ethics and profits go hand in hand. Innumerable misled sufferers need the right path pointed out to them and, if the physicians do not do it, then no one will. It is just another step in the service of humanity.

WARD L. SCHRANTZ

Carthage, Mo.

TONSILLOPHOBIA

[Here is a little skit that you may let "Johnny's" mother read, in order to supplement your directions as to his diet and clean-out and personal hygienic care generally. It is written in Doctor O'Reilly's characteristic popular style. It will make a hit with Johnny's mother, we feel certain.

Amputating tonsils not hopelessly diseased, yanking out teeth that might be saved, and various other bits of "destructive criticism" of the ill-used body's misdeeds remind us of the doings of old Doctor Eisenbarth, who cured toothache by smashing the patient's head, and did many similar stunts. It is very much like freeing a dog of fleas by drowning him.

Let us have common sense guiding our advice to our patients. Fads and fashions never will be dependable guides. All successful and worthwhile treatment is common-sense treatment. However, we will let Doctor O'Reilly have the floor.—Ed.]

—

In these days of ours, the family which can not boast of the removal of a pair of tonsils, or an appendix, or a half-dozen teeth, or a gall-bladder, or 'adhesions', can not expect to "keep up with the Joneses." We have grown so used to being bullied that, when a 'Public-Health Nurse' or some such busy-body enters our home and aggressively insists upon the removal of Johnny's tonsils, we do not stand upon our rights to cast her out into exterior darkness, but meekly submit Johnny to the loss of two very important organs which the Creator evidently designed to be the sentinels of the lungs.

If the fathers and mothers of children will take the trouble to swap notes with their neighbors, they will quickly learn that almost every child with enlarged tonsils is a "candy-kid"; one of those youngsters who "gets what he wants when he wants it"; one of those whose mother says: "Johnny is such a miserable eater; I have to coax and coax and coax; I think he needs a tonic." Yet, Johnny's stomach is chock full of chocolate-creams, lolly-pops, ice cream cones, nut sundaes, cream puffs, etc., which call for a lot of oxidation, to convert their sugars into something usable by the body, and Johnny is running and romping, as only a boy can, and should, and using up a lot of tissue which should be oxidized and destroyed and eliminated from his body, by way of the kidneys. But, *all this stuff can not be so eliminated* because the demand upon the oxidizing power of the body of this candy-kid is so great that the blood must be content to burn up the boy's body waste to a point *this side of perfection*, with the formation of waste-product-salts which must be deposited *somewhere*.

Now, Mother, no one knows better than you that in every house there is a "stick-away-closet" into which things are thrown, always with the firm purpose of "getting at that and straightening it out" which, of course, is not done until the accumulation of odds and ends is so great that the door will not close. You know, of course, that this "stick-away-closet" is not in the parlor or dining room but in some unused nook or cranny, some passive place which has no special connection with the "active" conduct of the house.

Just so in the human body. We have "active" tissues, such as muscles, nerves and the like, and we have "passive" tissues, such as bones and tendons and the sheaths or coverings of muscles, nerves, the capsules or coverings of joints, the sockets of the teeth or the lining of the tooth cavity in the jaw, the valves of the heart, the covering of the skull, *everyplace in the body* where it is necessary to connect something with something else or to establish a foundation for the active parts of organs of the body (like a tonsil) to do their work comfortably and well. Just picture the fiber of a grape fruit supporting the pulp and you have it. *Everywhere* we have what is known as *connective tissue*, and we Doctors call it *white fibrous tissue*. It is a purely passive tissue, having no active function to perform like a nerve or a lung structure would have, and having no power of stretching or being stretched (like a muscle) or contracting or being contracted. It is just a "passive," inert structure, like the forked stick, the pieces of string like a muscle-tendon and the piece of leather of Johnny's sling-shot. Only, the two pieces of rubber band, like a muscle, are capable of being stretched and, by contracting, shoot the pebble to its mark.

Now, Mother, you are not a Doctor, but you know perfectly well that you can not have, do, or make anything worth while without producing some waste and that the quality of work done is often measured by the kind of waste, like the neighbor who estimated the social standing of a new arrival on the block as "high" because they had "swell swill." So, Johnny's muscular energy in playing ball or his mental agitation in doing "sums", or his expenditure of vocal power in rooting for his team means the destruction of a certain amount of body tissue (and clothes) which must be oxidized, or burned up, until it is converted into a gas, called "urea" which must be (or should be) thrown out of that child's body, *as a gas*, by way of the kidneys and skin.

Suppose the oxidizing power of the body is taxed to its limit by the extraordinary demands made upon it by a stomach stuffed with mawkish, non-nutritional sweet stuffs—the oxygen contained in the red cells of Johnny's blood, *must* be given up for the absolutely necessary constructive work of Johnny's body and mind and, if there is any skimping to be done, it must be of the oxygen which nature intends for the *destructive chemistry* of Johnny's body; that chemistry which takes care of the destruction of the *dead-body-meat* resulting from the activity of the tissues of the body that you recognize as the scum on the surface of the

water in the bath-tub, which is the "scurf-skin" or the dead-skin structures which have "done their bit" and given place to new skin structures.

Under the circumstances of this reduced oxidizing power, there is incomplete destruction of the body-tissue-waste and, instead of burning it up to the formation of a *gas*, called urea, the blood is only able to expend sufficient oxygen to burn it to the formation of a *salt*, called urate of sodium, or urate of magnesium, or urate of ammonium, for instance, which can not be gotten rid of very easily.

Now, Mother, you know that, if you add an excess of sugar to your cup of tea, it becomes syrupy and thickened. So, also, the large quantity of these waste-product salts, if carried around in the blood current, would make *it* syrupy and sluggish of motion. To avoid this, Nature provides that these *waste-product-salts of the body* shall be thrown out of the blood current into the passive structures of the body —that white fibrous tissue, those "stick-away-closets" in the sheaths of muscles or nerves, in the capsules of bones, in the sockets for the teeth, in the gums, in the *tonsils*, etc., etc., *"until tomorrow!"* However, tomorrow's story is the same as today's, and next week's the same as tomorrow's and, instead of redeeming these promissory notes, more and more and more are made and distributed until the stick-away-closets are filled to overflowing, and outraged Nature compels specific attention to "growing pains" in a child, or a knee-joint rheumatism in a poor man, or an "acidosis" in a rich man (take your choice, the pain's the same), or a swollen and inflamed tonsil, which is promptly blamed for the rheumatism when, as a matter of fact, it is a *result* of the very same cause,—the *bad chemistry* which has resulted from overloading the oxidizing function of the boy's body with an excess of sweets in the stomach or an excess of liquid poisons in his large bowel because no attention has been paid to the proper movements of the boy's bowels.

What's the answer? Rip out a pair of tonsils which are apt to become swollen and inflamed *as a warning that the door of the stick-away-closet* won't close because the *limit has been reached* in the toleration, by the body, of retention of tissue waste? Or had you not better clean out the waste bin,—the bowels of little Johnny, with some sweet cascara or such mild cathartic as your Doctor suggests?

Then, had you not better put your Double-A-foot down firmly on the *"candy"* proposition and see to it that the child has plenty of milk and vegetables and vegetable soup and cornstarch, rice, bread and tapioca pudding, bread and butter,—a maximum of vegetables and cereals and a minimum of meat and sweets? . . . Some candy, of course, but the *cheap*, common, hard candy which is made with *cane sugar*; not the fancy stuff which must be made with glucose in order to hold its shape in the show case for a long time after it is made.

Then teach your boy to use the nose that God gave him; to blow it as the longshoreman does, "thumb to one side (the other free) and blow; forefinger to one side (the other free) and blow; then wipe" using a handkerchief to make the longshoreman's scientific plan a little more esthetic or elegant.

Then teach your youngster to breathe through that nose, so that the oxygen of the outer air will "do its bit" in purifying the nose cavities and keeping the membranes clean and free from "catarrh" . . . I know, there are a lot of doctors who taboo the word "catarrh" . . . You should worry about names; the *condition* is the thing you are trying to prevent. Then you may be quite sure that one cause of tonsillar irritation, coming down from the back of the nose in the shape of an unnatural and uncomfortable discharge, will be removed and, believe me, that is a lot better than removing a pair of tonsils which the poor kid will need to help protect his lungs, later on in life, from invasion by the tuberculosis germ, perhaps.

Occasionally—occasionally, mind you—a pair of tonsils is so rotten that they are *all* scar tissue and a roosting place for any old germ and have not enough pep or fighting-blood supply in them to put up any kind of a fight. All right; if they are *really* no good, have them out just as you would have a rotten tooth removed. But, for goodness sake! do not rip out perfectly good teeth because there is some Riggs' disease, or some perfectly self-respecting tonsils just because they cause some inconvenience when they warn you of danger. . . . You surely would not drop a flower-pot on a man's head if he rang your bell and awakened you from a deep sleep at three o'clock in the morning to tell you your house was afire? Then, why punish tonsils when they are only trying to act as sentinels?

JOHN J. A. O'REILLY

Brooklyn, N. Y.

DR. BORBORYGMUS CRITICIZES DR. POPEMOFF*

My dear Colleague:—

When I have the unspeakable charlatanismus of the verdammte impostor Popemoff in your

October number read, I am with indignation gefilled that he such a foolishness before a scientific audience attempt should.

For many years, in my laboratory, before war by jealous neighbors upon the Fatherland forced was, I labored on my arbeit "The Hetero-Testiculo-Transplanto-Rejuvenation of the Prematurely Senescent Male," and have thousands of experiments performed on cavies, rabbits and cocks, for the confirming of my theorem and the perfection of my operation's-technic.

In the Military Hospitals of Germany, with my assistant, Dr. med. Wotan Orfil-Schmel, I was able to do many most successful man-to-man transplantations in wounded soldiers. The gratitude of these poor soldiers, who were the fortunate recipients of these transplanted glands, was most elevating.

Soon after our victorious German Army their advance on Metz from the west began, I became a prisoner of war of the Americans and my opportunities for further researches were halted. In the prison camp, an officer of the American Army, with a name most difficult of pronunciation, Lieut. Doctor Stringemalong (who told me confidentially that he was of the Royal Family of Packingtown) seemed in my researches and discoveries much interested and commended my efforts with many strange American words which I in the dictionary not find can. His Highness told me much of the work of a surgeon of Chicago who grafted goat-glands on deacons. This surprised me, as I knew not that researches outside of Germany were done. I am unable to say with exactness what a deacon is, as I can not find of it any description in the biologic literature in the University library of Upsala; but I assume it is of the sheep family, different from those of the Fatherland, because His Highness the Lieut. Doctor told me that, after the transplanting operation, the deacons pursue chickens; which by German sheep not done is.

When the war ended was, in Upsala, where I went my studies to continue with peace and quiet, I thought much of the work of your Chicago surgeon and often to me recurred the hard-to-understand expression of His Highness, my friend of the prison camp, who habitually referred to some to-the-camp-attached eunuchoid individuals as "poor fish". One day, to me the thought came, "Why not make them good fish?" But how? Philosophically placed I datum by datum and my theorem developed. From my work in Hetero-Testiculo-Tranplanto-Rejuvenation in mammals, it was but a step the experiment to Pisces to extend. I did not Walruses go pursuing or Hudson seals like this dummkopf Popemoff, but I the fish studied which could easily obtained be in Upsala. After much observation and cogitation, excluded I all but the Gadus Morrhua. This fish, on account of his intense love-of-the-place-of-his-birth, his strong moral nature, his love of family, his fecundity and perseverance as a father, and the military formations and tactical instincts shown in his schools, had qualities which I at once recognized as worthy to be perpetuated in the super-race from which I am sprung.

I immediately made a preliminary report of my thoughts, not only to all of the German, Austrian and Swiss medical publications but I even a lengthy abstract sent to the *Rusky-Bunkski Medical Journal* of Moscow, from which journal, I no doubt have, Popemoff stole my idea.

Long before he started writing his nature-faker fish stories of armadillo and walrus prostates, I had my technic perfected and had successfully grafted a preparation obtained from codfish upon elderly but youthfully inclined gentlemen, with such gratifying results that I am now awaiting a command to proceed and place my invaluable services at the disposal of the Imperial Bridegroom of Doorn.

Respectfully,

DR. MED. A. BORBORYGMUS.

Upsala, Sweden.

Dear Editor: I am the "royal lieutenant" referred to by Dr. Borborygmus and modestly forward the above communication sent you through me.

ALFRED DE ROULET.

Chicago, Ill.

*See this journal, October, p. 758.—ED.

SALT AND CANCER. EXCESSIVE EXERCISE

In your December issue, you publish the view of a correspondent, that cancer is due largely to the excessive use of salt and that the harmful effects of sodium chloride can be systematically overcome by the administration of silver sulphide to counteract this harmful effect of excessive ingestion of common salt, and materially reducing cancer.

You ask for discussion of this important question. I have devoted twenty years to the study of cancer and have, incidentally, investigated the question as to whether sodium chloride plays an important part in the cause of the disease. I am satisfied that it does, but not exactly in the way in which the writer of the article referred to has concluded.

Bashford discovered, about twenty years

ago, that fish are most subject of all vertebrates to cancer, but, so far as I know, no investigation has attributed this to the irritating effect of the sodium chloride in salt water.

The inciting cause of cancer is local irritation. As the writer of the article referred to says, sodium chloride no doubt passes readily through the stomach and intestinal wall by osmosis, and may, no doubt, be a large factor in the irritation that induces cancer, although the fundamental physical and psychic causes of cancer should receive much more consideration, both in prevention and in treatment.

But, confining the attention now to the question before us, is sodium chloride broken up into its elements, in the organism, or does it pass through the kidneys and skin as it was ingested?

The commonly accepted view is that salt is the chief source of the Cl in the HCl of the gastric secretion. I can show by clinical experience that that is not correct.

According to the most trustworthy authority, the Eskimo use no salt at all; yet, their diet must require as much HCl as that of the average American.

For many months past, I might say for years, I have used no sodium chloride except the small amount that I happen to get in bread, nor have my children, who have maintained extraordinary growth, had any salt at all.

It would not be difficult to demonstrate that the sodium chloride ingested is excreted through kidneys and skin. I could undertake to furnish such a demonstration if the funds were available for the purpose, by both the clinical and laboratory method. This would be both interesting and valuable.

—

Quite recently, two apt illustrations have come to my attention of the harm so generally done by incompetent direction of physical exercise.

A young woman who was afflicted with goiter was not only allowed but encouraged to engage in athletic contests in a girls' school, until she was placed in the care of a Chicago physician, who at once prohibited the excessive exercise and prescribed special exercises adapted to her case. This, together with the other treatment, gradually brought about a gratifying recovery. This young woman now understands how the excessive exercise was harmful, and she has learned how to exercise so as to secure benefit from it.

A student of Swarthmore College was properly directed in his exercise and made good progress in his studies. He removed to another school, where the direction was less capable, and soon broke down, as a result, apparently, of lack of proper regulation of his physical work.

It can not be too strongly impressed upon those in charge of youth and upon business men and women who need systematic exercise that this form of treatment ought to be prescribed according to the individual case, with as much skill as any other from of treatment for health restoration and health maintenance.

It is a strong recommendation of walking, as a means of exercise, that it is less liable to be misapplied than almost any other.

A man dropped dead a few days ago who had started taking a course of lessons of a "physical-culture expert" in Chicago.

Thousands have died while taking medicine, but it is not necessarily to be inferred that medicine causes the death in such cases. However, improperly-regulated physical exercise is a large cause of premature death. This observation was suggested by witnessing some physical-culture stunts at a "physical-culture carnival" at one of the armories in Chicago, recently, in which a few national champions figured.

Whether the half-sick young men and young women present, who were admonished to "get into the game", would do better to jump into the frying pan or remain weak (for most people are sickly, more or less, largely unfit and uncomfortable, for want of proper food, proper exercise, right thinking and other means of better health)—that is the question.

The men who do those remarkable feats, the champion boxers and wrestlers, were men of extraordinary physical development to begin with, and those of them who do live as long as the average, those of them who do maintain fitness more than ten years (which the majority do not) do so in spite of their bad physical training, not because of it.

About 15 years ago, we used to see pictures of a man named Dowd, who showed enormous muscles and proposed to teach you how to get the same. He didn't see fifty.

A few years ago, a mutual-insurance society decided that it would be a good plan to improve the health and prolong the lives of its members by adopting a system of physical culture. The secretary wrote to a man who was publishing his picture in a physical-culture magazine and offering to teach others how to have muscles like his and to be well.

The professor journeyed from New York to see the directors of the organization, nearly a thousand miles. But, when they saw him, they didn't want his system.

Proper physical exercise is one of the means of maintaining health and fitness and of prolonging life; but, much harm is done by improper physical exercises.

To be beneficial, exercise must never exceed the point of normal fatigue. A margin of safety must always be left. And, a period of rest should follow every muscular strain; it should be as carefully regulated as the period of muscular contraction, or strain.

Probably, all of those who exhibited remarkable strength on the occasion referred to, including some young women who danced most charmingly, were the worse for their performance of the evening.

Such exhibitions can do a great deal of good. Public funds might well be used to promote them. But, care should be used to see that proper instruction is given that will prevent harm through practicing blindly by following the practice of the average exhibition athlete.

Trotting horses are well fed and otherwise well cared for, continuously, and the champion horses generally live much longer than the average horse. We need a good mixture of science and horse sense in the training of athletes and in the training of amateurs.

THOMAS J. ALLEN.

Chicago, Ill.

ORANGE AND PECAN GROVE FOR SALE

A fortune, aside from practice, in the land of Sunshine, Fruits and Flowers. In the oil belt, between border and Tampico. One-hundred thousand bearing orange trees, near my property.

I desire to sell five hundred budded, bearing, paper-shell pecans; five hundred oranges, bearing; nearly one hundred acres of land, some sixty-five acres in pecans, oranges and sugar cane.

Perpetual water rights, good titles. Climate delightful, similar to that of southern California; near border. No revolutionary troubles there.

Same character of land as in California. Without water or oranges, it would be worth over $1000.00 per acre.

An American physician has been located there for the past fifty years.

Price very low. Liberal terms offered.

G. F. BROOKS.

Ysleta, Texas.

—

[Doctor Brooks informs us that preparations are being made for drilling for oil within twelve miles of this property. The offer seems to be an unusually good one for some physician who desires to retire from practice.—ED.]

EXAMINATION FOR JUNIOR PATHOLOGICAL TECHNICIAN

The United States Civil-Service Commission announces an open competitive examination for junior pathological technician. A vacancy in the Army Medical Museum, War Department, Washington, D. C., at $1,800 a year (plus "bonus"), and vacancies in positions requiring similar qualifications, at this or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion.

Applications will be received as late as January 16.

Applicants should apply at once for Form 1312, stating the title of the examination desired, to the Civil-Service Commission, Washington, D. C.; the Secretary of the United States Civil-Service Board, Customhouse, Boston, Mass., New York, N. Y., New Orleans, La., Honolulu, Haiwaii; Post Office, Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Calif., Denver, Colo.; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R.

Applications should be properly executed, *excluding both vouchers and the medical certificate,* and must be filed with the Civil-Service Commission, Washington, D. C., with the material required, prior to the hour of closing business on January 16, 1923.

The exact title of the examination desired, as given at the head of this announcement, should be stated in the application form.

Applicants entitled to preference should *attach to their applications* their original discharge, or a photostat or certified copy thereof, or their official record of service, which will be returned.

A FEW WORDS ABOUT AUTOHEMIC TREATMENT

The *Western Medical Times* for November, 1922, contains an article on the subject given in the title and contributed by Dr. S. R. Klein, of New York City. Doctor Klein criticizes the socalled autohemic therapy. He says,

among other things.

"How can anybody say something about treatment and cure of blood diseases, when he does not know what erythrocytes are? What lymphocytes are? Where they come from? What is their physiological amount? And what the pathological percentage is? And, in so many cases, there are different findings. Every case is a specific case for itself. A man must be well acquainted with the foundation of medical sciences, familiar with the principal things in medical research, and first must know physiology, chemistry and pathology. How can a man do some work for you in blood diseases if he has not even an idea about blood chemistry? And what happens day by day? It is really remarkable that no one will undertake to make a bookcase if he is not a carpenter. Nobody can make a pair of shoes if that individual is not a 'professional' man in that line. But, medicine and surgery are some things where you do not need to produce anything, do not need to deliver any goods—just tell something about your 'great' experience, great success with patients; collect their names and fictitious addresses and you succeed—in making money—in abundance.

"Autohemic treatment is a dangerous problem—that is a sure thing! By destroying hemoglobin and corpuscles, I do not see how the centrifuged blood, mixed with distilled water, will operate in the system. How will antibodies be increased? What microorganisms will be killed, and how? How will we be able to increase phagocytes? How will the injected 'bloodless' blood operate in the infected area? How quickly will this defermented material act—the hemin and globulinless blood? What will show the specific gravity of the blood? The percentage of lymphocytes? Eosinophiles? Polymorphornuclear leucocytes? Or are they to be ignored entirely? Will the leucocytes increase? Will hemoglobin increase in cases of leukemia, pernicious anemia, tuberculosis, syphilis, et cetera? What will become of the 'purified proteins'? How will the sterilized, centrifuged, depotentized blood 'serum' act locally? Will the bacteria disappear? Will the hemin reappear in the urine? Sugar? Acetone? Diacetic acid? All these questions must be answered to the prompt satisfaction of the scientist, pathologist, biologist and physiologist.

"I know cases where the blood pressure became so terribly quick, high, vehement, 'impulsive,' that it took hours and hours, by an intelligent diagnostician and laboratory expert to eliminate the injected 'bloodless' blood." [Evidently that "bloodless" blood must have done something—was not inert.—Ed.] "With what, do you think? With a simple saline solution—of course! We can not do good work with defibrinated serum, or a serumless fibrin, attracting salt, and nitrogen, sugar, et cetera. The hemoglobin may be of the lowest grade of destruction. Still it is a protein which helps the blood instead of destroying it. And, if those research workers do not give any attention to our fifty-five-year-old bacterial theory, how do they explain the rapidly developing fever after such treatment? Is not fever the consequences of appearance of bacteria in the blood?" [Not necessarily bacteria, but of some foreign split protein.—Ed.] "Is not fever produced by specific bacteria, which are different in typhoid, cholera, pneumonia, tuberculosis, or meningitis?

"Should we abandon our great work with autogenous bacterins, which have been found competent in combating the living bacteria, as well as the dead; for improving the antibodies and phagocytes?

"Autohemic serum is to be condemned without question. It can not take the place of autogenous vaccines!"

—

[Doctor Klein takes it for granted that the originator of autohemic therapy does not know what erythrocytes and lymphocytes are, where they come from, what is their physiological amount, what is their pathological percentage, and so forth. If he refers to a certain Chicago "physician" who claims to have originated autohemic therapy and who advertises it widely to the public, we have no quarrel with him. However, if Doctor Klein accuses the actual modern protagonist of this form of therapy, Dr. Charles H. Duncan, of New York, it must be admitted that Doctor Duncan is an able physician of great erudition and experience. He based his theory and practice upon certain principles that are "Homeopathic" in their origin but that have more recently found acceptance in investigations dealing with the problems of immunization and of vaccine therapy.

We hold no brief for autohemic therapy, although recently we have seen some decidedly pleasing results from its practice. However, we conceive it to be one application of the specific-protein therapy, the protein injected into the circulation being in this instance not bacterial but homogenous. We doubt whether there is anybody who could explain the action of the reinjected blood any more than any immunizator has succeeded in explaining the *modus operandi* of a bacterial vaccine (whether

stock or autogenous, is immaterial) after its parenteral injection. Personally, we believe that we are dealing with an enzyme action, but we realize that we are simply using words and not very lucid ones at that.

The injection of blood abstracted from the patient himself has been followed in many instances by great improvement. French physicians have reported surprising results and, not so long ago, a South American physician related, in an article published in *The British Medical Journal* some experiences in which bronchial asthma was noticeably reduced after the injection of autogenous blood.

Frankly, we do not understand autogenous therapy, but we are not ready to say that it is quackery or charlatanism or that it is ill founded, or that it is to be condemned without question. It seems to us that there are several very insistent questions in the way of such broad condemnation. Whether it can or can not take the place of autogenous vaccines, is a question that need hardly to be advanced because, in certain cases, a vaccine will be indicated clearly while, in others, it would be senseless. If it is realized that autohemic therapy may claim to be the parent of serum therapy, the question may not seem quite so absurd as Doctor Klein would have us believe.—Ed.]

PROGRESS IN THE USE OF ANTISEPTICS

If we will look back thirty years, when antiseptics were in their infancy, we can not help but note the radical change, especially in surgical practice. We now use no antiseptics in surgery at all, and very few in medicine. To make this clear, we must bear in mind that an antiseptic is an agent that will kill bacteria. The period in antiseptics, therefore, is now past; for, an agent that will kill bacteria will also destroy the tissue upon which they grow; and, now, we are in the age of asepsis rather than antisepsis. In other words, we are using agents that will render the field upon which the bacteria grow aseptic, or make the field uninhabitable for the microbes.

Metchnikoff has shown that the organism resists the localization and multiplication of pathogenic bacteria through the phagocytes which destroy them. It has been found possible to increase the number of phagocytes and to enhance their antibacterial action. Therefore, in the treatment of infection, we must do everything to help the system in all its functions as well as to treat the infection locally. For that reason, our measures must be directed toward increasing the resistance of the body and allowing the local infection to be expelled from the body.

Thirty years ago, all our measures were directed, more or less, to the local infection and, if we look back, we find that many cases of gangrene (sloughing) were due to the external application of strong antiseptic solutions, notably 1:500 bichloride of mercury, 5 percent carbolic-acid solution, and other such strong antiseptic solutions. Today, solutions of such strength are only used as disinfecting agents for clothes, bedding, etc., and not on the human body at all. I remember a hospital in Chicago that had an operating room built, in which, before every operation, bichloride steam would be used, and the operating room hermetically sealed so that they would be sure to kill all the germs in the room. During the recent war, we used very mild solutions, such as "Carrel-Dakin," "Dichloramine-T," "Normal Saline Solution," etc. We have paid the price for the use of antiseptics, and have now graduated to the stage of asepsis.

Now that we are convinced that we get better results from the use of aseptic solutions, we have abandoned entirely antiseptic solutions as surgical aids. Of course, we still have surgeons who will wash their hands in strong carbolic solution, and then wash that off immediately with alcohol. This measure, however, is also being entirely abandoned on account of the fact that it is not necessary; for, most surgeons use sterilized gloves, and experience teaches that we get better results with sterile (aseptic) goods than with antiseptic articles. No matter what we do in surgery, we must never lose sight of the fact that the part we are treating or operating on is a part of the whole body, and our results will be commensurate with the attention we pay to the various functions of the body as a whole in keeping up the natural resistance to the invasions of bacteria (immunity). Every surgeon must be well versed in the use of time-tested drugs and other modern measures of systemic treatment, if he wishes to give his patient the full benefit of the knowledge he is supposed to have. This fully agrees with the definition of a surgeon, as the late Prof. Nicholas Senn has laid it down; namely, "A surgeon is a physician who knows when and how to operate," and this definition is more true today than it ever was.

Surgeons will operate on presumably clean cases, will take every precaution to have the field of the operation aseptic and then perform the operation in a septic manner. Yet, infec-

tion does occur and, when it does, the average surgeon is at a loss to know how the infection was introduced, or what to do to keep it from spreading and ultimately cure it. If they would pay more attention to the proper functioning of the body, and would keep up the resistance of the patients, they would have much better results. For that reason, we have abandoned entirely the long period of preparation that we were accustomed to thirty years ago, and do no longer lower the resistance of our patient before operation. The wide-awake live surgeon will pay just as much attention to the systemic treatment after an operation as he will to his wound.

Above all things, the modern surgeon will keep from using antiseptics. The days were when antiseptics were even given per mouth with the idea of sterilizing the gastrointestinal tract. Of course, in the preparation of the patient for a genitourinary operation, the internal use of urinary antiseptics, if we may call them such (as hexamethylenamine or other such drugs that will, by liberating formaldehyde, render the urine aseptic) are a great aid. In operating upon the gastrointestinal tract, it may be advisable to give intestinal antiseptics and, for operations on the lungs, perhaps drugs like creosote, sulphocarbolate of zinc. But the sheet anchor of doing surgery successfully is the following rule:

To operate with as little shock as possible, both mental and physical; to see to it that the resistance of the body is kept at its highest point; to choose an anesthetic for the individual case; to do the operation with as little damage as possible, in as short a time as possible and, above all things, to avoid the use of strong antiseptic solutions to the wound.

Chicago, Ill. BENJ. H. BREAKSTONE.

DR. WILLIAM CLINE, OF WOODSTOCK, VA.

For many years, Doctor Cline, of Woodstock, Va., favored CLINICAL MEDICINE with occasional contributions, always on some practical topics on which he possessed an inexhaustible fund of information. More recently, Doctor Cline was keenly interested in the wonderful caverns that had been discovered and fitted up near his home and that are being visited by unnumbered tourists.

For several years, Doctor Cline complained, in his letters to the editor, that he could not recover promptly from a severe indisposition. It was apparent that he was feeling discouraged and tired. Quite recently, the doctor's daughter informed us of his passing away on November 19, 1922, at the age of seventy-eight years, six months and twenty-six days.

Doctor Cline was a representative of that class of practitioners that, according to many people, is doomed, but that refuses to die out, namely, the family physician. In his young manhood, he served with distinction in the Confederate Army. After the war, he studied medicine, first with his brother and then at the University of Maryland, where he graduated. He had practiced in Woodstock continuously since February, 1889.

We knew Doctor Cline well, as we know so many of our subscribers—through correspondence, and we loved him as a true, genuine family physician and practitioner of the old school, an honest man, devout Christian. Our personal relations with him have always been pleasant and cordial, and we shall miss his occasional letters. We know that he was anxious to go to his rest. Peace to his ashes.

What Others are Doing

THE ETIOLOGY OF TUBERCULOSIS

A Few Fundamental Factors

Allen K. Krause (*J. Outdoor Life*, 19:69, March, 1922) says that, from earliest times, etiological factors have been associated with phthisis or tuberculosis. The best known of these is that of familial or inherited disposition to tuberculosis. Phthisis has a tendency to recur again and again in many families, especially among young adults, and frequently after years have elapsed since any known familial contact with tuberculosis has existed. If, as it has been proved, family predisposition plays no part in this matter, it can only be explained by the fact that in the bodies of human beings there reside quiescent infections of every variety, extent and degree. Persons unusually exposed in childhood, as the offspring of tuberculous parents would be, carry into adult life more extensive and more lasting quiescent infections, which, in a greater number of instances would be more open to activities than in the rest of the population. The question of familial predisposition, however, will not be definitely settled until more decisive information is obtained from controlled experimentation in animals.

Among the factors which most writers would associate with variations in the course of tuberculous infection is that of the age of the recipient of tubercle bacilli. Observers practically agree that manifest tuberculosis is peculiarly and extraordinarily fatal to human beings during the first 2 years of life, comparatively benign from then until about 12 to 15 years, again increasingly fatal until about 30 or 35, and after this once more less malignant. The usual explanation is that tuberculosis is so florid in the infant, because its resistance is slight, due to the fact that infants have not been immunized by previous contact with germs. This proposition should be accepted with reserve. One should take into account the factors of high dosage and repeated infection with high dosage. A baby lives in a fixed and uniform environment. If a parent is consumptive, it will be in closer physical contact than the older children. If it is unfortunate enough to be fed on tuberculous milk, it receives a diet which is entirely contaminated with the germs of disease. Babies in such surroundings would therefore be expected to receive much larger numbers of tubercle bacilli, and this opportunity for greater dosage should be given its proper weight in accounting for the unusual malignancy of tuberculosis in infants.

CONTROL OF MALARIA MOSQUITO

Malaria causes serious agricultural losses in the Delta region of the lower Mississippi, in the reduced efficiency of plantation hands during the season of the year when the crops most need attention. The peculiarity of the shallow bayous in which the Anopheles, or malaria mosquitoes, breed abundantly is, that they do not have drainage outlets by which the surface water can be carried off. To meet this difficulty, the Bureau of Entomology conceived the idea of clearing a section of one of the bayous and impounding the water, to note the effect of a change from the swamp-like conditions of the natural bayou, especially in connection with the reduction of mosquito breeding.

In Department *Bulletin* 1098, "Impounding Water in a Bayou to Control Breeding of Malaria Mosquitoes," by D. L. VanDine, Entomologist, the story of this successful experiment is told. A section of Bayou Walnut, at Mound, La., was cleared of all vegetation. By means of a cross-levee, or fill, and spillway, the water was kept at a sufficient height over the bed of the stream above the dam to prevent the further growth of vegetation. A clean margin was maintained. It was necessary also to make some provision to prevent crawfish from working through the fill and causing serious leakage.

There were several advantages to the plantation from the impounding work, apart from the control of the mosquito breeding. A permanent supply of good water for live stock during the dry season was obtained; there was an extension of the land available for pasture; the deeper and more extensive water of the impounded area offered a favorable place for game fish, thus furnishing a source of food; and the lake-like body of water afforded recreation to the plantation people; moreover, it added materially to the attractiveness and value of the property.

Among the Books

HERTZLER: "THYROID GLAND"

Diseases of the Thyroid Gland. By Arthur E. Hertzler, M.D. With a Chapter on Hospital Management of Goiter Patients. By Victor E. Chesky, M.D. Illustrations. St. Louis: C. V. Mosby Company. 1922. Price $5.00.

Hertzler has a splendid reputation as a surgical thinker and he writes as he thinks.

The present volume, like several others from his pen, contains a good deal of his own personal experience, and this, in the Reviewer's opinion, makes the book particularly valuable.

While, as a teaching monograph, it takes into consideration the needs of the student and general practitioner, it is one that carries very little ballast in the way of quotations from other authors.

Hertzler tells you all about the anatomy, physiology, pathology and diagnosis of diseases of the thyroid gland—the author pays little attention to any other disease than goiter—and, finally, shows every step of thyroidectomy. One chapter, by Doctor Chesky, deals with the hospital management of goiter patients and is sweet, because brief. The chapter needs editing; for, in one point, the author talks of goiter patients as "she", as if goiter were a gynecologic disease.

The illustrations, especially the histologic ones, are especially good. Paper, print, and binding are of the best.

There is no question that a persual of this monograph will keep the reader abreast of the goiter problems. Of course, as has been said, the book is the result of one individual's experience, and this must be taken into account. While the teachings are sound, here and there one will not agree with him. Thus, the Reviewer is a firm believer in the value of the x-rays, as a preparatory measure, in the so-called toxic goiters. The labors of the late Carl Beck, of New York, are still fruitful, as the writer of these lines can testify. Indeed, he has seen tachycardia and nervousness yield promptly to a few x-ray applications and he can not but feel that, when Hertzler speaks of the x-rays as a means of entertaining the patients while they are in the hospital awaiting operation, he has chosen an unfortunate vocabulary. Not everything in medicine is "psychic". There is such a thing as material results of very material remedies—and the x-rays are one of them.

But, on the whole, the monograph is a splendid and valuable literary effort. [G. M. B.]

WOLBACH: "CANCER"

New Growths and Cancer. By Simeon Burt Wolbach. Cambridge: Harvard University Press. 1922. Price $1.00.

This little volume is a reproduction of one of the popular "Harvard Health Talks" delivered at the Medical School of Harvard University. They aim to provide in easily accessible form modern and authoritative information on medical subjects of general importance.

The author's presentation of cancer is not so interspersed with scareheads and alarming assertions as are many modern articles. Professor Willcox, of Princeton, is quoted as saying that, despite frequent assertions to the contrary, cancer mortality is not actually increasing. The author adds that, in his opinion, we may feel fairly secure in continuing our general habits of living without the fear that we are drifting towards an era of cancer. Cancer prophylaxis remains a problem concerning individuals, and education our sole means of effecting results.

HUTCHISON: "FOOD"

Food and the Principles of Dietetics. By Robert Hutchison, M.D. Illustrated. Fifth Edition. New York: William Wood and Company. 1922. Price $5.00.

This new edition of Doctor Hutchison's includes the results of the author's experiences and observations during and after wartime. He belonged to the Food (War) Committee of the Royal Society and also acted as medical adviser to the ministry of food. In these capacities, he had considerable experience in the problems of rationing, the results of which are in part embodied in the text.

In the chapters dealing with feeding in disease, the author declares that his object has been to explain the principles upon which dietetic treatment should proceed rather than to construct menus; believing that, if these principles are grasped, it should not be diffi-

cult to draw up a detailed diet suited to the circumstances of the individual patient.

Hutchison's textbook is one that we consult very frequently and always with decided satisfaction. The Reviewer can recommend this cordially to general practitioners.

National Conference of Social Work

Proceedings of the National Conference of Social Work. At the Forty-Ninth Annual Session Held in Providence, Rhode Island, June 23-29, 1922. Published for The National Conference of Social Work by The University of Chicago Press, Chicago, Ill. Price, Cloth, $3.00, postpaid $3.15.

This volume, containing the transactions and the papers read before the National Conference of Social Work, constitutes a tremendous fund of information on matters that interest the physician as a physician and also as a hygienist, a sanitarian and as a citizen. The papers are arranged under the following divisions: Children, Delinquents and Correction, Health, The Family, Industrial and Economic Problems, Neighborhood and Community Life, Mental Hygiene, Organization of Social Forces, Public Officials and Administration, The Immigrant.

FITZGERALD: "PREVENTIVE MEDICINE"

An Introduction to The Practice of Preventive Medicine. By J. G. Fitzgerald, M.D. Assisted by Peter Gillespie, M.D., and H. M. Lancaster, B.A.Sc., and Chapters by Andrew Hunter, J. G. Cunningham, and R. M. Hutton. With Appendix Articles by Various Contributions. St. Louis: C. V. Mosby Company. 1922. Price $7.50.

Doctor Fitzgerald argues correctly that physicians in general practice must become integral factors in the public-health program in a much larger measure than has been the case hitherto. There is need of the cooperation of the family physician with public health workers to insure the smooth running of the public-health machine. This additional service should supply the necessary care and supervision of the general health of individuals which, of course, falls within the duties of the general practitioner.

The book outlines some of the work of the physician who is to function on the preventive as well as the curative side of medicine. It is a handy volume of 805 pages of text and 11 pages devoted to the index. It deals with all those diseases that concern the community as much as the individual. Some chapters are devoted to food, including water; others to domestic and community sanitation, to school hygiene, maternity, infant and child hygiene, industrial hygiene, public health clinics and health centers. The text impresses us as being very carefully prepared and as covering very excellently a multitude of subjects concerning which general practitioners should be informed.

BARKER: "CLINICAL MEDICINE"

Clinical Medicine. I. Tuesday Clinics At The Johns Hopkins Hospital. By Lewellys F. Barker, M.D., LL.D. Illustrated. Philadelphia: W. B. Saunders Company. 1922. Price $7.50.

This book is a reproduction of clinics held at the Johns Hopkins Hospital by the author. It combines, in a way, the two methods of teaching now striving for supremacy. In the attempt to improve upon the old, purely didactic, form of teaching, the author believes that students were introduced to actual clinical work too abruptly and that the older forms of the amphitheater clinic and the clinical lecture have been neglected unduly. The fact that formerly an excessive didacticism prevailed does not justify, in the author's opinion, the complete elimination of a clinical lecture.

In his "Tuesday Clinics", Doctor Barker has combined the two methods very effectively. His own lectures are interrupted by reports from the attending physician, by questions put to students and also by them (and, naturally, the necessary answers). In short, Doctor Barker has succeeded in these lectures in making the subject of the study of disease extremely interesting and attractive to the student; in enlisting the active cooperation of the latter and in obliging him to take part in the clinical teaching and being taught. Looking over this volume, we are sorry that we can not go to school again. We should like to be one of Doctor Barker's students.

LORAND: "LIFE SHORTENING HABITS"

Life Shortening Habits and Rejuvenation. I. The Ten Chief Life Shortening Habits. II. The Rapid Ageing of Women. III. Rejuvenation. By Arnold Lorand, M.D. Philadelphia: F. A. Davis Company. Price $2.50.

Doctor Lorand enumerates as the ten chief life shortening habits, alcoholism, overeating, the use of tobacco, sexual indiscretion, uncleanliness, ambition, avarice, anger, vanity, avoidance of parenthood. He attributes the rapid ageing of women to the influence of smoking, the influence of insufficient nourishment and reduction cures, the influence of an

improperly constituted diet, the influence of insufficient intake of fluids, the influence of unduly frequent use of purgatives, the influence of cosmetics; the influence of anticonceptional practices.

The last part of Doctor Lorand's book is devoted to the subject of rejuvenation, and in this he refers to the ingestion of animal-gland preparations, to the use of certain drugs, of the ultraviolet rays, of natural and artificial sunlight, and the use of radium baths. Doctor Lorand is well known for his advocacy of sensible dietetic habits and of hormone preparations. His latest book, which was written partly under the stress of wartime, is, like his preceding ones, stimulating, encouraging, constructive. His teachings are sound and his presentation is attractive.

MACLEOD: "PHYSIOLOGY AND BIOCHEMISTRY"

Physiology and Biochemistry in Modern Medicine. By J. J. R. MacLeod, M.B. Assisted by Roy G. Pearce, A. C. Redfield, and N. B. Taylor, and by others. Fourth Edition. Illustrated. St. Louis: C. V. Mosby Company. 1922. Price $11.00.

New editions of MacLeod's work follow each other in surprisingly rapid sequence, if it is considered that the subject treated is by no means easy. And, yet, the fact that new editions are constantly called for is not so surprising. The textbook is one of those that one wants to read and study at leisure. When it is realized that disease processes are really those of perverted physiology, it is self evident that knowledge of physiology, both normal and abnormal, is essential for a proper understanding of disease.

The text is divided in nine parts, containing a total of 104 chapters, covering 971 pages. In the first part, the physico-chemical basis of physiological processes, we find such intriguing topics as acidity, H-ion concentration, acidosis, colloids, ferments, enzymes. Part II discusses the blood and the lymph. Part III is devoted to the circulation of the blood, the last chapter of which deals with shock. Part IV deals with respiration; Part V with digestion; Part VI with the excretion of urine; Part VII with metabolism—one of the highly-important subjects of present-day studies. Part VIII attracts us particularly, being devoted to a discussion of the endocrine organs, or ductless glands. In Part IX, the central nervous system and the control of muscular activity are considered. Here we find a chapter on the autonomic nervous system, or the efferent pathway to smooth muscles and glands.

If this outline of the contents of MacLeod is not sufficiently tempting, you had better buy the book and study it for yourself. You will find much in it that you did not know.

OCHSNER: "PHYSICAL EXERCISES"

Physical Exercises for Invalids and Convalescents. By Edward H. Ochsner, B.S., M.D. Second Edition. St. Louis: C. V. Mosby Company. 1922. Price 75 cents.

This little book has evidently found ready acceptance, since a second edition has become necessary. It is intended especially for patients who are convalescing from surgical operations or from severe illness and also for persons who are engaged in sedentary work and who, because of lack of proper physical exercise, are below par. As far as we can judge, the exercises given, which require no apparatus whatever, are very excellent and effective.

OLIPHANT: "MATERNITY"

Maternity and the Care of the Child. A Book of Valuable Information for Prospective Mothers. Fourth Edition. Published by H. N. Oliphant, M.D., Frankfort, Indiana.

Doctor Oliphant's useful little booklet has been reviewed before in these pages. It is written in a popular style and is intended for the direct information of the prospective and the actual mother.

Part I deals with pregnancy and gives good advice to the pregnant woman; the best part of it being that she should place herself under the observation of a competent physician early.

Part II is devoted to the care of the baby. Part III contains tables of general information relating to the care of the baby, including a dietary. In Part IV, we find supplementary tables suggesting what to do in case of accident. We like the book and should not hesitate to hand it to our pregnant patients.

KELLOGG: "NEW DIETETICS"

The New Dietetics. What to Eat and How. A Guide to Scientific Feeding in Health and Disease. By John Harvey Kellogg. Battle Creek, Michigan. The Modern Medicine Publishing Co. 1921.

John Harvey Kellogg's "New Dietetics" studies the subject of dietetics exhaustively. With Doctor Kellogg, diet is not a fad; it is an exact science. After reading about vitamines, food salts and food acids and their relationship to good health, one is tempted to

speak of the "alkaloidal therapy" of food, as it were. After all, is not fat-soluble A specific in rickets, and unpolished rice in pellagra?

As editor of *Good Health* and medical director of the Battle Creek Sanitarium, Doctor Kellogg was enabled to conduct numerous and comprehensive tests on specially-selected squads of men and women. This lends authority to what he has to say and incites favorable attention.

In his book, Doctor Kellogg studies the digestive process and with good reason. Following the classic work of Prof. J. A. Pavlov, it is well to remind us that a diet indulged in from a sense of martyrdom and food taken without pleasure, without giving rise to what he terms "appetite juice" induced by the sight and smell of appetizing food, is bound to remain fruitless. Prof. Pavlov's remarkable experiments proved of such interest to Doctor Kellogg at the time that he undertook the trip to Petrograd to study them at first hand.

The New Dietetics is encyclopedic in scope. There are 900 pages of it. Yet, it is a chummy, chatty, readable book. It is a gold mine of facts, a sweeping survey of the whole field of dietetics. [S. E.]

LABAT: "REGIONAL ANESTHESIA"

Regional Anesthesia. Its Technic and Clinical Application. By Gaston Labat, M.D. With a Foreword by William J. Mayo, M.D. Illustrated. Philadelphia: W. B. Saunders Company. 1922. Price $7.00.

Regional anesthesia must not be confounded with local anesthesia, because it goes much further than the latter. It interrupts the sensory-nerve conductivity of the region of the body to be anesthetized and procures a "blocking" either of the nerve paths or of the field of operation. With local anesthesia, the anesthetic fluid is injected along the line of incision or within the structures of the surgical wound and is more limited.

We are under the impression that the author of the book before us probably has done more research and practical work in regional anesthesia than anybody else in this country. He certainly has succeeded in presenting the subject in a remarkably useful manner.

After the introductory chapter, with its general considerations, the succeeding ones take up the following subjects: General Principles of Technic; Blocking of Cranial Nerves; Operations on the Head; Blocking of Spinal Nerves; Operations on the Neck; Operation on the Upper Extremities; Operations on the Thorax; Operations on the Abdomen; Genito-Urinary and Rectal Operations; Operations on the Lower Extremities; Intraspinal Block (Spinal Anesthesia); Discussion of Spinal Anesthesia; General Discussion of the Value of Regional Anesthesia.

The book is provided with a full and excellent index.

COMRIE: "THOMAS SYDENHAM"

Selected Works of Thomas Sydenham, M.D. With a Short Biography and Explanatory Notes by John D. Comrie, B.Sc., M.D. New York: William Wood & Co. 1922. Price $3.00.

Physicians who are interested in the history of medicine will find this little book on Sydenham of great interest. It is to Sydenham that we owe much of the progress in medicine which changed the views and methods of physicians in the second half of the seventeenth century.

Sydenham was essentially a clinician. He insisted that it is at the bedside alone where one can learn disease. True, with our present-day methods of study, we learn much about disease in the pathological and also in the physiological laboratory. Nevertheless, Sydenham's insistence upon bedside study may well be taken to heart by those among us who are inclined to stress unduly the importance of the laboratory.

The little book contains fragments of those writings of Sydenham that made his name famous for all times. We have enjoyed reading it.

LIBBY: "HISTORY OF MEDICINE"

The History of Medicine In Its Salient Features. By Walter Libby, M.A., Ph.D. Illustrated. Boston and New York: Houghton Mifflin Company. 1922. Price $3.00.

Here is another little book that will appeal to the student, especially to him who has a predilection for the history of medicine. It is a long cry from the view of the Egyptian priest-physicians that the cause of disease was the malice of a demon, the justice of an avenging god, the ill-will of an enemy, or the anger of the dead—and our present-day theories (not to use the more boastful expression "knowledge") according to which disease is incited by the invasion of pathogenic microorganisms or is brought about by a chemical poisoning because of faulty metabolism or through various other agencies. The course of human thought during all these centuries is interesting to trace and a book like the present one will surely make us grateful for living in an age in which we can claim credit to many real

accomplishments even though it would be a serious mistake to make pretentions to complete knowledge.

We can cordially recommend Doctor Libby's History of Medicine to the general practitioner. It is not compendious enough to alarm nor bulky enough to frighten the reader. It is interestingly written and the presentation of the material is splendid.

SOLLMANN: "PHARMACOLOGY"

A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology. By Torald Sollmann, M.D. Second Edition, Entirely Reset. Philadelphia: W. B. Saunders Company. 1922. Price $7.00.

This excellent manual can best be introduced by quoting from the announcement of the publishers some remarks concerning its important features:

Arrangement: Two sizes of type have been used throughout, the larger print giving a connected and concise statement of the essentials of pharmacology, the smaller type containing more detailed data for consultation.

Plan: To those drugs that are really and generally used, extensive consideration is given. The new drugs and remedies are emphasized with definite instructions for their use.

Prescription Writing: This section is simple, easily understood, and will fully equip the student for the correct writing of prescriptions.

References, especially to recent literature, are numerous and of valuable assistance. There is an extensive bibliography of 59 pages.

The Appendix, in addition to the extensive bibliography, contains a tabulation of average doses classified with reference to their importance and a check-list of important preparations.

Newness: The revision for the second edition, pubished February 1922, was unusually heavy, the book being reset from cover to cover. Important additions and changes have been made to every part of the text.

"MEDICAL CLINICS OF NORTH AMERICA"

The Medical Clinics of North America (Issued Serially, one number every other month). Volume VI, Number 1, July, 1922. By St. Louis Internists. Illustrated. Vol. VI. Number 2. By San Francisco Internists.

Philadelphia: W. B. Saunders Company. Price, per clinic year (July 1922 to May 1923), Paper $12.00; Cloth, $16.00 net.

In the St. Louis Number (No. 1), some of the attractive subjects dealt with are the following: Endocrine Adiposity (Dr. William Engelbach); Pubertas Præcox (Dr. John L. Tierney); The Use of Lactic Acid Milk (Whole Buttermilk) in Infant Feeding Over Long Periods (Dr. Borden S. Veeder); Acute Intermittent Cardiac Decompensation (Dr. Elsworth S. Smith); A Bacteriologic Clinic—Diagnostic Methods (Dr. Ralph A. Kinsella).

In the San Francisco Number (No. 2), the clinics that appeal to us particularly are: Paroxysmal Tachycardia. A Case Where Quinidin Lessened the Frequency of Attacks (Dr. Albion W. Hewlett); The Influence of the Hydrogen-ion Concentration and Buffer Value of Foods on Digestion, with Special Reference to Infancy (Dr. Harold K. Faber and Fannie Hadden); Syphilitic Aortitis (Dr. Eugene S. Kilgore); Bacterial Asthma in Children. The Role of Infection and the Value of Vaccine Treatment (Dr. Samuel H. Hurwitz); A Case of Adult Myxedema and One of Childhood Myxedema (Dr. Hans Lisser); The Radium Treatment of Carcinoma of the Mouth (Dr. Laurence R. Taussig).

"THE ROCKEFELLER FOUNDATION"

The Rockefeller Foundation. Annual Report. 1921. The Rockefeller Foundation, 61 Broadway, New York.

The Rockefeller Foundation. International Health Board. Eighth Annual Report. January 1, 1921, to December 31, 1921. 61 Broadway, New York. January, 1922.

These reports are of more than general interest, for the reason that The Rockefeller Foundation concerns itself with many investigations and practical undertakings that make for better health. We need mention only the survey of the hookworm situation, the movement for malaria control, the divisions of medical education, of medical research, and so forth, and make good our point.

We believe that interested physicians can obtain copies of both reports by writing to The Rockefeller Foundation. It will well pay them to do so and to study both publications.